The Mining Journal
RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 622.—Vol. XVII. LONDON, SATURDAY, JULY 24, 1847. [Price 6d.

SOUTH SYDENHAM, DEVON—VALUABLE MINE AND MATERIALS FOR SALE.

MR. RENDELL has the honour to announce, that he has received instructions from the present adventurers to OFFER FOR SALE, BY PUBLIC AUCTION, on Monday, the 26th day of July inst., by Two o'clock in the afternoon precisely, at the Account-house, on the mine, in one lot, all that SETT of the valuable MINE, called, or commonly known, by the name of WHEAL CONCORD, situate in the parish of South Sydenham, in the county of Devon, for the remainder of a term of 21 years—18¼ of which are unexpired; together with the following MINING MATERIALS, lately erected on the said mine—viz.: A STEAM-ENGINE, of 30 inches cylinder, erected on the most approved principle, with the pumps, rods, ladders, capstan and shears, &c., necessary for carrying on the operation in the engine-shaft.

Also, 3 horse-whims, pulleys and poppet-heads, 2 whim-ropes, 4 kibbles and chains, water-wheel and crusher, with cranks, about 2½ tons of new iron, a quantity of old iron, smiths' bellows, anvil, vice, screw stock and plates, beam and scales, weights, a quantity of smiths' and miners' tools, a lot of old and new timber, wheel-barrows, grinding-stone and frame, dressing tools, &c.

The above mine and materials are offered to the public in consequence of pecuniary difficulties; and, if it should be worked effectually, it is expected that large dividends will be realised by an enterprising company—upwards of £10,000 worth of lead ore having been returned from the mine at different times.

This sett also adjoins Wheal Grace on the west, where an engine has lately been erected, for the purpose of working Wheal Concord lode; and, from its present promising appearance, it bids fair to be a very valuable mine.

The reports, and any other information respecting the present workings, may be obtained of Capt. Opie, the resident agent on the mine; and any further particulars of Messrs. Little and Woolcombe, solicitors, Devonport; or of Mr. Snell, solicitor, Callington.

Callington, July 10, 1847.

VALUABLE AND IMPORTANT SHARES IN MINES IN CORNWALL, FOR SALE.

MR. TIPPET has been directed to SELL, BY PUBLIC AUCTION, on Wednesday, the 28th day of July instant, at Two o'clock in the Afternoon, at Pearce's Royal Hotel, Truro, in such lots, and subject to such conditions, as shall be then and there produced, the following highly valuable and important MINE SHARES,—viz.:—

4 (128th) SHARES of and in CREEGBRAWS COPPER and TIN MINE, in Kenwyn.
4 (120th) SHARES in TREVISKEY COPPER MINE, in the parish of Gwennap.
3 (120-th) SHARES in the EASTERN BARRIER COPPER MINE, in Gwennap.
20 (3800th) SHARES in WEST WHEAL JEWEL COPPER and TIN MINE, in Gwennap.
3 (128th) SHARES in WHEAL PENKIVEL TIN and COPPER MINE, in Kenwyn.
9 (120th) SHARES in BESORE LEAD MINE, in Kenwyn.

The agents on the mine will give information, and for further particulars, application may be made at the auctioneer's office in Pydar-street, or at the offices of Messrs. Smith and Roberts, solicitors, Truro.—Truro, July 14, 1847.

PATRICROFT—IMPORTANT COLLIERY FOR PEREMPTORY SALE.

MR. T. M. FISHER is directed peremptorily to SELL, BY AUCTION, on Tuesday, the 3d day of August, 1847 (unless previously disposed of by private contract, of which due notice will be given), at the Law Society's Rooms, Norfolk-street, Manchester, punctually at Four o'clock in the afternoon, all that well-known and well-established COLLIERY, situate at PATRICROFT, near Manchester, now worked by the owner (who is withdrawing from the trade), together with the STEAM-ENGINES, STEAM-BOILERS, HEADSTOCKS, WINDING GEAR, BUILDINGS, and other fixed matters thereto belonging. The purchaser may also take the loose stock, consisting of boats, carts, horses, &c., at a valuation, but will not be held bound to do so. This colliery, established on a first-rate principle, has only been at work about six years, and is partly freehold, and partly held in lease, under Sir T. J. De Trafford and the trustees of the late Duke of Bridgewater. The machinery is of the best modern make, and in excellent working condition—the situation one of the most convenient in the county for a ready sale of all the produce, having a roomy basin communicating with the canal, and a short branch railroad partly made, which will enable the coals to be delivered in Manchester at 6d. per ton. In addition, it is ascertained that a rich bed of ironstone, 22 in. thick, exists upon the property, which, from analysis, is found to contain from 32 to 37 per cent. of metallic iron. This may be leased on very reasonable terms; and as the coals are most suitable for smelting, and limestone is to be had on the estate, can be profitably worked, at little extra expense.

Orders to view, and other particulars, will be ready 21 days before the sale, and may be had from the auctioneer, 31, Princes-street, Manchester; W. Heaton, solicitor, Rochdale; Woodcock, Part, and Scott, solicitors, Wigan; W. Benson, solicitor, King-street, Manchester; T. Livesey, Chamber Hall, near Oldham; or J. Hodgkinson, on the premises.

FOR SALE, AT TRENOW CONSOLS MINE, NEAR MARAZION, in the county of Cornwall, an 85-inch cylinder STEAM PUMPING-ENGINE, 10-feet stroke, equal beam, with three boilers of 264 tons; 6 fathoms of 17-inch, 36 fathoms of 16-inch, and 10 fathoms of 9-inch PUMPS; 4 15-inch, 1 8-inch, and 1 9-inch windbores; 2 15-inch and 1 13-inch working barrels; 4 15-inch clack seat-pieces; 1 15-inch and 1 14 inch H and top door-pieces; 1 12½-inch, 1 14-inch, and 2 16-inch plunger-poles, with suitable stuffing-boxes and glands; 2 capstans and 1 shears; 1 12-inch and 1 9-inch capstan rope, each about 100 fathoms long; 1 balance and 1 angle-bob; 80 fathoms of from 7 to 13-inch main-rods; strapping plates, bolts, and burrs flange bolts, staples, and glands; horse-whims, whim chain, and kibbles, with numerous articles, well worthy the attention of mine adventurers and agents.

Application to be made to the agents at the mine; or to Mr. Henry Thomas, Mining Offices, 8, George-yard, Lombard-street, London.—Dated July 15, 1847.

TO CAPITALISTS—ELIGIBLE INVESTMENT.—TWO SIXTEENTH SHARES in an extensive and valuable SLATE QUARRY, held under the Crown, and situate about four miles from BANGOR. A capital of upwards of £20,000 has already been invested, and 10 per cent. returned in the first year. An extension of the works has now been determined on, with an increase of capital to £32,000. One of the proprietors wishes to DISPOSE of a PORTION of his INTEREST: the price per share is from £1600 to £1700, and the purchaser might suit his convenience in the time of payment. The demand for slates is unlimited, and the price has lately advanced 10 per cent. The person wishing to sell is associated in this quarry with several gentlemen—merchants of long standing in London, &c., whose names guarantee the highest respectability.

Further particulars may be known, and an inspection of the books of the company obtained, by application to Messrs. Crossman, Sommers, & Co., 28, Threadneedle-st., London;

COUNTY WATERFORD—SLATE QUARRY TO BE SOLD.—The INTEREST in ROSS SLATE QUARRY, distant nine miles from the city of Waterford, four from Kilmacthomas, three from Kilmeaden, three from Portlaw, and three from the celebrated copper mines at Bonmahon.

A considerable sum has been expended by the late proprietor in exploring the above quarry, and erecting suitable machinery to work it: the quality of the slate raised has been pronounced, by eminent judges, to be of a superior description, and not inferior, in mineral qualifications, to the best Welsh slate, as will be seen from the annexed testimonials.—This concern has been at work for the last eight or nine years, during which period the produce has been extensively made use of in covering houses in the neighbourhood of the quarry, and for many miles round. Markets have been established for the sale of them in the following towns—viz.: Carrick-on-Suir, Clonmel, Cahir, Tipperary, Wexford, and the city of Waterford, where they have become established, and in much repute. Houses covered with them, as far back as the opening of the quarry, may be seen, where no trace whatever of decay or discolouration can be observed.

The quarry being only distant three miles from Kilmeaden Pill, where boats can load or discharge, and a little further down vessels; there is great facility for conveying the produce to the places before-mentioned and other markets.

This concern has only stopped working since the death of the late proprietor, which took place last April, and could be resumed without much expense, as new machinery has been erected, and the floor of the quarry free from rubbish.

Persons wishing to become purchasers of the interest in this concern, will be fully informed as to title, profit likely to be realised, and any other information requisite, on application to Arundel Hill, Esq., Donnybrook, Donerailé, Ireland, who will close with a purchaser, should reasonable terms be offered, as he is desirous to dispose of the concern without reserve.—John Hovenden, the late steward, who resides adjacent to the quarry, will, on application, show the concern, machinery, &c.

TESTIMONIALS.

Extract from Report on Ross Quarry, by Messrs. Watson and Coulthard, engineers.

In conclusion, we may state, that the Bangor and Ross slate are nearly equal, but the latter is considered to stand the weather better.

From T. Oldham, Esq., M.R.A., Curator of the Dublin Society, and Engineer to the University of Dublin—August 8, 1844.

There were a few large ones (slates), which seemed sound, clean, and not heavy, and the general quality was not inferior to the ordinary Strawberry slates (same vein as Bangor)—the Ross did not appear to me liable to vegetate.

From Mr. Charles Hovenden, Blackrock, Dublin—May 31, 1844.

I showed Mr. Owens (architect of the Board of Works) the Ross slates, and he highly approved of them; and gave Mr. Bell permission to cover the Government work with them, now in progress, at the Police Station, Kingstown.

Portlaw, May 21, 1845.

In reply, we may state, that, within the last five or six years, we have covered 30 or 40 houses with Ross slates; and they are a useful, good looking, article, and we have no reason to doubt their proving durable in quality.

For MALCOMSON, BROTHER, & SHAW.
(Signed) ROBERT SHAW.

Curraghmore, May 16, 1845.

I can certify, that the Ross slates are the best that I have seen—they cover very well: are a good sound slate, and the weather does not affect them. The tenants are using them on the estate, where they are highly approved of.

(Signed) RICHARD EGAN,
Slater to the Marquis of Waterford.

Wexford, May 23, 1845.

I received your letter, and likewise the case, containing the samples of slates, which, I must say, are very good, and will surely take here.

(Signed) NICHOLAS HAYES, Architect.

MINING ADVENTURERS' SUBSCRIPTION ROOM, ORIGINAL REGISTRY OFFICE FOR THE SALE AND PURCHASE OF MINING SHARES.

CROSSMAN, SOMMERS, AND CO., AGENTS,
28, *THREADNEEDLE-STREET LONDON.*

SHARES FOR DISPOSAL.

Bedford United Mines	Grambler and St. Aubyn
Coombe Mine	Wheal Mary and Elizabeth
North Wheal Camel	Princess Royal
Dartmoor Consols	Pennant
Devon and Courtenay Consols	South Wheal Sophia
New East Crowndale	South Wheal Maria
East Wheal Rough Tor	Wheal Susan
Wheal Esse	Victoria Tin Mining Company
Great Wheal Frederick Tin Mine	West Wheal Rough Tor
Great Wheal Rough Tor	&c. &c. &c.

TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, ONE 36-inch PUMPING-ENGINE, 6 feet stroke, equal beam, boiler, 8 tons, balance-bob, and first piece of rod.
ONE 24-inch STAMPING-ENGINE, 8 feet stroke, boiler, 11 tons.
ONE 24-inch WHIM-ENGINE, 6 feet stroke, boiler, 4 tons, and cage.
ONE 18-inch WHIM-ENGINE, 4 feet stroke, boiler, 7 tons, and cage.
SIX TUBULAR BOILERS, 11 tons each.
A large IRON BALANCE-BOB, 12 tons.
Application to be made to Capt. R. Williams on the mines.
Dated Godolphin Mines, Helston, Cornwall, May 27, 1847.

WHEAL ESSA COPPER AND SILVER-LEAD MINE, in the parish of ST. STEPHENS, on the Banks of the Tamar, near Saltash, CORNWALL. *ON THE COST-BOOK SYSTEM.*

This MINE is situated on the southward of, and is in the run of lodes parallel to those of, the extensive and valuable copper mines recently discovered on the banks of the Tamar, and from which immense riches have been realised.

The setts are for full periods of 21 years—dues, 1-15th; extent—length, three-quarters of a mile; breadth, half a mile.

SIX LODES have been already discovered, rich for grey copper, and yielding 60 ozs. of silver per ton.

The mine is divided into 256 shares, of £16 each, of which £3 is to be paid down on transfer, for costs already incurred, and the remaining £4, for working capital, to be called for when required.

Applications for shares, and requests for further information, should be addressed (prepaid) to Capt. Robert Billing, the managing agent; Mr. John Martyn, the purser; and Mr. W. Rundle, auditor of accounts, Saltash; or to the company's office, 18, Cornhill, London, where specimens of the ore may be seen, and a more extended prospectus obtained.

WHEAL PORTLEDGE COPPER AND SILVER-LEAD MINE COMPANY,
ON THE COST-BOOK SYSTEM.

BANKERS—Messrs. Harding, Biddington, and Co., Bideford.
SECRETARY—Mr. John How, jun., Bideford.

This MINE is situated on the sea-coast, in the parish of ALWINGTON, about 4 miles west of the town of BIDEFORD, in the county of Devon, and from the rich specimens of minerals already produced, bids fair to be a most profitable undertaking. The set extends over 500 acres of land, the property of one gentleman, from whom a lease of 21 years, from the 19th of April, 1847, has been obtained, at a royalty or dues of 1-15th of the produce.

Advantages present themselves for working this mine, which rarely occur, not only as respects the appearance of the lodes, but also from the facility afforded for working it at a considerable depth without the aid of expensive machinery, as well as its being in the immediate vicinity of an excellent place for shipment.

The cliffs rising from the sea-coast (and in which the minerals are found), are sufficiently high to admit of driving an adit level on the course of the lode, about 50 fathoms below the surface of the land, thereby rendering the expense of steam or other power to clear the water from the mine to that depth unnecessary.

Samples of copper ore taken from the mine have been assayed by two different public assayers, who have given the same result of produce—namely, 14½ per cent. Specimens of silver-lead ore have also been raised, the value of which is not yet ascertained.

In the formation of the present company the lessee proposes to admit coadventurers with himself on fair and equitable terms in all the advantages which the mine offers; he, therefore, proposes to divide the mine into 4000 shares, reserving 1000 to himself, upon which he will pay equally with the other adventurers.

£1 1s. per share will be required to be paid on the transfer of the shares; £1 per share to go to the lessee, and 1s. per share to be applied to the working of the mine. Future calls, if required, to be made at 1s. per share, at intervals of not less than three months; but from the great advantages afforded for working the mine, and the rich specimens of ore already raised, as well as the general formation and appearance of the lodes and strata, it is confidently believed that not more than the first deposit of 1s. per share will be required to be expended in working the mine, before sufficient ore will be raised to pay the cost, and leave a dividend for the shareholders.

A committee of management will be chosen out of the shareholders at the first general meeting. No shareholder will be liable for any amount above the number of shares he holds. Applications for shares, or other particulars, to be made to the secretary.

WHEAL PORTLEDGE COPPER AND SILVER-LEAD MINE COMPANY.
ON THE COST-BOOK SYSTEM.—In 4000 Shares.

The FIRST MEETING of the adventurers in the above mine will be HELD at the office of H. A. Harvie, Esq., Bideford, on Thursday, the 29th inst., at Three P.M. The shares being all taken, except 256, which will be held by the lessee, unless disposed of before the day of meeting.

JOHN HOW, Jun., Secretary.
Bideford, July 21, 1847.

NORTH WALES MINING COMPANY, county MERIONETH.
UPON THE COST-BOOK SYSTEM.
Divided into 12,500 parts, or shares, with a deposit of £2 10s. per share.
OFFICES—No. 2, NEW BROAD-STREET, LONDON.

TRUSTEES.
The RIGHT HON. LORD VISCOUNT LAKE.
The HON. EDWARD CECIL CURZON.
SIR HARRY DENT GORING, Bart.
LUKE JAMES HANSARD, Esq.

Reports of the present state and capabilities of the several mines have been made by eminent mining engineers; but as they are too lengthened to be comprised within the limits of a prospectus, printed copies may be had on application at the offices of the company, 2, New Broad-street, London, where specimens of the ores may also be inspected.

Persons desirous of visiting the mines can do so on applying to the purser, at the offices of the company; or to James Harvey, Esq., Brynygwin, Dolgelly, North Wales, who will give letters of introduction for such purpose.

Application for shares to be made to the purser, at the offices of the company, the solicitors, and to the following brokers and agents:—Mr. B. Rankin, stockbroker, 23, Token-house-yard; Messrs. Watson and Cuell, mining agents and sharebrokers, St. Michael's-alley, Cornhill; and Mr. C. W. De Bernardy, 46, Leicester-square, London; Messrs. T. Cardwell and Sons, and Mr. J. Fernyhough, Manchester; Mr. P. Kempson, sharebroker, Birmingham; Mr. C. S. Edsall, Truro; Mr. J. Cunningham, jun., Bristol; Mr. T. A. Marten, Swansea, South Wales; and Mr. J. Russell, Exchange South-East, Liverpool; Messrs. C. Wellbeloved, and Co., Leeds; and Capt. W. Williams, near Crowan, Cornwall. Copies of the prospectus can also be had at the office of the *Mining Journal*, 26, Fleet-street.

NORTH WALES MINING COMPANY.—NOTICE.—NO FURTHER APPLICATIONS FOR SHARES in the above company can be RECEIVED after MONDAY NEXT, the 26th inst. By order of the committee,
W. T. GRIFFITHS, Purser and Secretary.
Offices, No. 2, New Broad-street, London.

VENTILATION OF COAL MINES.

BIRAM'S ANEMOMETER, FOR ASCERTAINING THE VENTILATION OF COAL MINES.—This INSTRUMENT is now EMPLOYED by many EMINENT ENGINEERS, to whom reference can be given.

For particulars apply to the patentee, B. Biram, Esq., Wentworth, near Rotherham; or to the maker, John Davis, Derby, manufacturer of Miner's Dials, Pit Barometers, and Safety Lamps.

BRUNTON'S PATENT ORE-DRESSING FRAME.—These FRAMES, for DRESSING TIN, COPPER, and OTHER MINERALS, having been in use, and given satisfaction, on several mines, during the last two years, the PATENTEE begs to call the attention of all Adventurers and Mine Agents to the great advantages, both as regards economy of labour and the great increase of mineral obtained by their adoption. The following gentlemen can certify as to their utility:—Thos. Boultbe and Sons; F. N. Johnson, Esq.; Capt. Jos. Vivian, Cook's Kitchen Mine; Capt. R. Kemick, St. Ives Consols; Capt. R. Edwards, Wheal Franco; Capt. W. Teague, Wheal Grey; Capt. James Miners, and Capt. Matthew Rogers, Carn Brea Mines.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its [illegible]ulness with which the manufacturers have been favoured from every part of the king[illegible], they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Cam[illegible]borne, Cornwall.

A GENTLEMAN, 34 years of age, of industrious habits, wishes for ACTIVE EMPLOYMENT: he has been accustomed to an Iron-Works, is acquainted with Lead Smelting, and has a moderate knowledge of Assaying, Mining, and Metallurgy: is fully competent to superintend large works, either railway or manufacturing, under the principal or otherwise, and speaks and writes German.—Apply (by letter) to Messrs. W. Bird and Co., iron merchants, 5, Martin's-lane, Cannon-street, London.

IRONSTONE.—TO LET, the WORKING of the IRONSTONE, lately discovered in a certain portion of a farm, in the TOWNSHIP of ESKDALESIDE, situated near the Whitby Branch of the York and North Midland Railway, and within five miles of the port of Whitby.—Further particulars may be obtained on application to Mr. H. S. Walker, Woodlands, Whitby.

TO BE SOLD, BY PRIVATE CONTRACT, a 21-inch cylinder PUMPING ENGINE (single) 5 feet stroke, equal beam, with boiler, 8 tons, in good condition, and now standing on Bowden Hill Mine, about eight miles from Morwellham, on the River Tamar.—For further particulars apply to Captain W. Williams, Wheal Friendship, near Tavistock.

TO BE LET, the PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS of rich IRON ORE, which, being calcareous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (post-paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire.

NEWLYN MINING DISTRICT.—A well-executed MAP of this DISTRICT, containing all the MINES in NEWLYN, ST. COLUMB MINOR, and CRANTOCK, will be ready for delivery next week—price 30s., coloured.

ILLOGAN DISTRICT is also nearly ready.

A few copies of GWENNAP and CAMBORNE DISTRICTS remain FOR SALE.

*** Orders received at the office of the *Mining Journal*, 26, Fleet-street, London; by Mrs. Heard, Truro; and by Mr. R. Symons, surveyor, Lemon-street, Truro.

BLAKE AND PARKIN, MEADOW STEEL WORKS, SHEFFIELD, MANUFACTURERS OF RAILWAY and OTHER SPRINGS, Improved Patent PLATED MOTION BARS, BUFFER-RODS and ENDS, CRANK PINS, PISTON RODS, ENGINEERS' FILES, CIRCULAR and MILL SAWS, and CUTTERS of all sorts.

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE, PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.
THREE KING'S COURT, LOMBARD-STREET, LONDON.

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES.
18, *THREADNEEDLE-STREET, LONDON.*

Mr. T. P. T. is a BUYER of North Roskear, at £350; North Pool, at £280; Stray Parks, at £80; East Pool, at £21—and a SELLER of North Roskear, at £375; Gwinear Consols, at £23; West Providence, at £18 10s.; Wheal Vor Consols, at £1.; Rosewarne, adjoining Gwinear, at £5.

MINING OFFICES, 1, ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.

WATSON AND CUELL, MINE AGENTS.—N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain.

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET, LONDON.*

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER,
MATTHEW-STREET, TAVISTOCK.

Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

JAMES LANE, MINING SHARE DEALER, 75, *OLD BROAD-STREET, LONDON.*

BRITISH MINING OFFICES, 41, MOORGATE-STREET, LONDON.—PROSPECTUSES may be had, and ORIGINAL SHARES ALLOTTED in the COPPER and SILVER-LEAD MINES connected with these offices, on application to the secretary, THOS. HENRY TAUNTON.

MONEY.—MESSRS. WINSTANLEY & CO., Sharebrokers, having at their command a very large SUM of MONEY for INVESTMENT, inform their friends and the public, they are prepared to make ADVANCES on the deposits of English or Foreign Railway or Mining Shares, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK at much less commission than usually charged.—6, Bank Chambers, City, opposite the Bank of England.

AUSTRALIAN MINING COMPANY, 1, ADELAIDE-PLACE, LONDON-BRIDGE.

The board of directors hereby give Notice, that, agreeably to the provisions of the Deed of Settlement, the SECOND ANNUAL GENERAL MEETING of the shareholders in this company will be HELD at this office on Monday, the 26th day of July inst., at Twelve o'clock precisely, to receive and audit report, accounts, and balance-sheet for the past year; to elect three directors, in lieu of three who go out by rotation, and to consider the propriety of filling up the vacancy occasioned by the resignation of Sir Hyde Parker, Baronet; and to fix the remuneration of the present auditors for the past year.

July 10, 1847. By order of the board, G. E. HODGKINSON, Sec.

CONSOLIDATED COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of proprietors of this association will be HELD at the office of the company, 26, Austinfriars, on Monday, the 26th July inst., at One o'clock precisely.

By order of the court of directors,
26, Austinfriars, July 7, 1847. WILLIAM LECKIE, Secretary.

COPIAPO MINING COMPANY.—Notice is hereby given, that the HALF-YEARLY MEETING of the shareholders in this company will be HELD at their office, 22, Austinfriars, on Thursday, the 29th inst., at One o'clock precisely. This meeting will be made special, for the purpose of filling up the vacancies in the direction of the company. Any shareholder desirous of offering himself a candidate, is requested to send notice to the secretary, on or before the 23d inst.

By order of the directors,
22, Austinfriars, July 16, 1847. FRED. GRELLET, Secretary.

CASCADE MINE.—Notice is hereby given, that a GENERAL MEETING of shareholders in the above mine will be HELD at the British Mining Offices, 41, Moorgate-street, London, on Saturday, the 31st inst., at Twelve o'clock precisely, for the purpose of appointing a finance committee—considering to what extent the operations in the mine shall be proceeded with—and transacting other business connected with the mine. NICHS. TRUSCOTT, Purser.
British Mining Offices, 41, Moorgate-street, London, July 22, 1847.

GADAIR MINE.—Notice is hereby given, that a GENERAL MEETING of shareholders in the above mine will be HELD at the British Mining Offices, 41, Moorgate-street, London, on Saturday, the 31st inst., at Twelve o'clock precisely, for the purpose of appointing a finance committee—considering to what extent the operations in the mine shall be proceeded with—and transacting other business connected with the mine. NICHS. TRUSCOTT, Purser.
British Mining Offices, 41, Moorgate-street, London, July 22, 1847.

TRELEIGH CONSOLIDATED MINING COMPANY.—A DIVIDEND (the second since May last) of SIX SHILLINGS per share—being 5 per cent. on the paid-up capital—has been this day declared, PAYABLE on Monday, the 2d of August, and on every succeeding Monday, between the hours of Eleven and Three o'clock. The Coupons, with a list, according to a form, which may be obtained at the office, must be left for examination three clear days previous to payment.
57, Old Broad-street, July 5, 1847. WM. NICHOLSON, Secretary.

UNITED HILLS MINE COMPANY.—Notice is hereby given that the ANNUAL GENERAL MEETING of the UNITED HILLS MINE COMPANY, adjourned from the 10th day of June, will be HELD at the office of the company, No. 5, Adam's-court, Broad-street, on Thursday, the 29th day of August next, at One o'clock precisely. By order of the board,
5, Adam's-court, Broad-street, July 22, 1847. JAMES SMITH, Secretary.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,
23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*
to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

GEORGIA TIN MINES, divided into 2048 shares, and worked *ON THE COST-BOOK SYSTEM.*

The necessary arrangements having been made for carrying out the operations of the company, all future communications are requested to be addressed to the offices of the company, 21, THROGMORTON-STREET, LONDON, where the specimens and plans, with the correspondence, may be seen. 40

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,
26, *CORNHILL, LONDON.*

Capital £100,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates. 41

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 33 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£20 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 2 1	346 2 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

UNDER ROYAL PATRONAGE.

KEATING'S COUGH LOZENGES are indispensably necessary, both for the Cure and Prevention of Coughs, Asthmatic, and all Pulmonary Complaints, during this changeable weather.

CURE OF COUGH OF EIGHT YEARS' STANDING, ACCOMPANIED WITH SHORTNESS OF BREATH! 42

Birkenhead, near Liverpool, Jan. 8, 1847.

SIR,—I have been afflicted with a severe cough and shortness of breath for nearly eight years, and after trying various remedies, did not find myself any better. I purchased a small box of KEATING'S LOZENGES of you, from which I found great benefit. The second box, 2s. 9d. size, completely cured me, and I can now breathe more freely, and am as free from cough as ever I was in my life. Hoping that others, similarly afflicted, will avail themselves of so certain and safe a remedy,

I remain, Sir, yours faithfully, WILLIAM ANDERSON.

To Mr. Geo. H. Howell, chemist, 72, Dale-street, Liverpool.

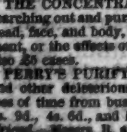
Prepared and sold, in boxes at 1s. 1½d.; tins 2s. 9d., 4s. 6d., and 10s. 6d. each, by THOMAS KEATING, chemist, &c., No. 79, St. Paul's Churchyard, London.

N.B.—The safety attendant on the use of these Lozenges, together with their agreeable flavour, has given them a well-merited popularity.

SIR JAMES MURRAY'S FLUID MAGNESIA.—Prepared under the immediate care of the inventor, and established for upwards of 30 years by the profession, for removing BILE, ACIDITIES, and INDIGESTION—restoring APPETITE, preserving a moderate state of the bowels, and dissolving uric acid in GRAVEL and GOUT; also as an easy remedy for SEA SICKNESS, and for the febrile affection incident to childhood it is invaluable.—On the value of magnesia, as a remedial agent, it is unnecessary to enlarge; but the fluid preparation of Sir James Murray is now the most valued by the profession, as it entirely avoids the possibility of those dangerous concretions usually resulting from the use of the article in powder, and in the over-dosed liquids of detected imitators.—Sold by the sole consignee, Mr. Bailey, of North-street, Wolverhampton; and by all wholesale and retail druggists and medicine agents throughout the British empire, in bottles, 1s., 2s. 6d., 3s. 6d., 5s. 6d., 11s., and 21s. each.

The Acidulated Syrup, in bottles, 2s. each. 43

N.B.—Be sure to ask for "Sir James Murray's Preparation," and to see that his name is stamped on each label, *in green ink*, as follows:—"James Murray, Physician to the Lord Lieutenant."



LEMONNIER, HAIR-WORKER to the Queen, and Member of the Academie de l'Industrie, and who obtained a Silver and Platina Medal at the Exhibition, has just INVENTED several NEW DESIGNS, as Palm Trees, Wreaths, Knots, and Cyphers, which he executes with hair in its natural state, without using gum or ther cement. A variety of Trees executed by a mechanical process. 44

No. 13, RUE DU COQ SAINT HONORE, PARIS.

ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,
With 25 coloured engravings.

Just published (in a sealed envelope), price 2s. 6d.; or post-paid to any address, 3s. 6d., in Post-office order or stamps,

SELF-PRESERVATION: A Medical Treatise, on Marriage, and on these Secret Infirmities and Disorders of Youth and Maturity that are usually acquired at an early period of life, which tend to destroy physical and mental energy, ardour, passion, and all the attributes of manhood. Illustrated with twenty-five coloured engravings, on the anatomy, physiology, and diseases of the urinary and reproductive organs, explaining their various structures, uses, and functions, and showing the injuries that are produced in them, by solitary habits, excesses and infection. With practical observations on the treatment of nervous debility, local and constitutional weakness, syphilis, stricture, and other diseases of the urethra. By SAMUEL LA'MERT, consulting surgeon, 9, Bedford-street, Bedford-square, London, Matriculated Member of the University of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries' Hall, London, &c. 45

REVIEWS OF THE WORK.

"The author of this singular and talented work is a legally qualified medical man, who has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaluable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*

"Unquestionably this is a most extraordinary and skilful work, and ought to be extensively circulated; for it is quite evident that there are peculiar habits acquired at public schools and private seminaries, which are totally unknown and concealed from the conductors of those establishments, and which cannot be too strongly reprobated and condemned. The engravings that accompany the work are clear and explanatory; and being written by a duly-qualified medical practitioner, will, doubtless, be the means of saving many a youth, as well as those of maturer age, from the various evil consequences resulting from early indiscretions."—*Magnet.*

Published by the author; and may be had from Kent and Richards, 51 and 52, Paternoster-row; Hannay and Co., 63, Oxford-street; Starie, 23, Tichborne-street, Quadrant; Gordon, 148, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and by all booksellers.——At home for consultation daily, from nine till two, and from five till eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c. The work may be had direct from the author's residence, and will be forwarded, free by post, to any address for 3s. 6d. in postage stamps.—9, Bedford-street, Bedford-square.

ON NERVOUS DEBILITY & GENERATIVE DISEASES.—Just published, the Thirtieth Thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with Plain Directions for its Perfect Restoration." A medical essay on those diseases of the generative organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood, and Old Age; with practical remarks on marriage—the treatment and cure of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c.

By J. L. CURTIS and CO., Consulting Surgeons, 7, Frith-street, Soho-square, London.

REVIEWS OF THE WORK:—"'Manhood:' a medical work. To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions, whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—*Chronicle.* "We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, a preceptor, or a clergyman."—*Sun, Evening Paper.* "Curtis on Manhood should be in the hands of youth and old age. It is a medical publication, ably written, and developes the treatment of a class of painful maladies which has too long been the prey of the illiterate and the designing."—*United Service Gazette.*

Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row; Hannay, 63, Oxford-street; Mann, 39, Cornhill, London; A. Heywood, Oldham-street, Manchester; Philip, South Castle-street, Liverpool: Campbell, 146, Argyle-street, Glasgow; Robinson, 11, Greenside-street, Edinburgh; and, in a sealed envelope, by all booksellers.—Messrs. Curtis and Co. are to be consulted daily at their residence, No. 7, Frith-street, Soho-square, London; and patients can have this work privately forwarded them, by initial or otherwise, to any part of the United Kingdom, direct from the authors' residence; or from any of the above agents, on remitting 2s. 6d. in postage stamps.

The Nineteenth Edition, price 2s. 6d.; free by post, 3s. 6d.

THE SILENT FRIEND: a medical work, on the concealed cause of constitutional or acquired debility, loss of muscular energy, and derangement of the generative system, nervous debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay & Co., 63, Oxford-street; Noble, 109, Chancery-lane; Gordon 146, Leadenhall-street; Purkiss, Compton-street, Soho, London. 46

Part I. of this work is addressed to those who are prevented from forming a matrimonial alliance, and will be found an available introduction to the means of perfect and secret restoration to manhood.—Part II. treats upon those forms of disease, either in their primary or secondary state, arising from infection—showing how numbers neglect to obtain competent medical aid, entail upon themselves years of misery and suffering.

The CORDIAL BALM of SYRIACUM is a stimulant and renovator in all cases of constitutional or acquired debility; by its use the whole system becomes restored to a healthy state of organisation. Sold in bottles, price 11s. and 33s.

THE CONCENTRATED DETERSIVE ESSENCE.—An anti-syphilitic remedy for searching out and purifying the blood from venereal contamination, scurvy, blotches on the head, face, and body, ulcerations, and those painful affections arising from improper treatment, or the effects of mercury, or secondary symptoms. Price 11s. and 33s. per bottle; also 5s. each.

PERRY'S PURIFYING SPECIFIC PILLS are perfectly free from mercury, copaiva, and other deleterious drugs, and may be taken with safety without interference with or loss of time from business, and may be relied upon in every instance. Sold in boxes, at 2s. 9d., 4s. 6d., and 11s. each, by all medicine vendors—of whom may be had the *Silent Friend*.—Messrs. R. and L. Perry and Co. may be consulted at No. 19, Berners-street, Oxford-street, London, daily.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....Consolidated Copper Mines of Cobre Association—offices, at One.
Australian Mining Company—offices, at Twelve.
South Metropolitan Cemetery Company—Bridge-house Hotel, at Eleven.
TUESDAY.....Cameron's Coalbrook Steam Coal and Swansea and Loughor Railway Co.—offices, at One.
City of Toronto and Lake Huron Railway—offices, at Twelve.
Reliance Mutual Life Assurance—offices, at One.
WEDNESDAY...United Mexican Mining Association—offices, at One.
Holyford Copper Mining Association—offices, at Twelve for One.
Phœnix Gas-Light and Coke Company—offices, at Twelve.
Ratcliff Gas-Light and Coke Company—works, Wapping, at Two.
THURSDAY.....Glen Osmond Union Mining Company—offices, at Three.
Wheal Portledge Mining Company—offices of H. A. Harris, Esq., Bideford, at Three.
Copiapo Mining Company—offices, at One.
London Reversionary Interest Company—offices, at One.
SATURDAY.....West Wheal Maria Mining Company—at the mine, at Two.
Gadair Mining Company—Mining Offices, Moorgate-street, at Twelve.
Cascade Mining Company—Mining Offices, Moorgate-street, at Twelve.
Boston, Stamford, and Birmingham Railway—offices, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

UNION BANK OF AUSTRALIA.

The annual general meeting of proprietors was held on Monday last, at their offices, Old Broad-street, for the purpose of receiving the report of the directors, and transacting other routine business connected with their affairs.

J. J. CUMMINS, Esq., in the chair.

S. JACKSON, Esq. (the secretary), having read the advertisement convening the meeting,—the CHAIRMAN read the report, of which the following is a copy:

REPORT.

The directors have again the pleasure of reporting, that the affairs of the bank are in a very satisfactory position, and that the business at the several branches, during the past year, indicates a steady improvement in the trade of the colonies, and an increase of wealth amongst the settlers in general.

The depression in the price of wool, in the English markets, last season, was, doubtless, attended with loss to speculative purchasers, and the rates were scarcely remunerative to the growers, owing to the high price of labour in the colonies.

The attention of the inspector and managers has been particularly directed to the reduction of bad and doubtful debts; all that have been regarded as hopeless have been closed, and written off to the debit of the London office; and it will be perceived, by reference to the annual account, which accompanies this report, that, in addition to a reserve previously held against bad debts, the sum of 10,309*l.* 10s. 11d. has been required to cover the debit then made. This sum has been deducted from the profits of the year—and thus the uncovered balance of the doubtful debt account open at the branches, which was stated in the last annual report to be 24,559*l.* 3s. 5d., and to remain as a charge upon the balance of undivided profits is reduced to 11,708*l.* 16s. 7d.

It is satisfactory to the directors to state, that no loss of any importance has arisen during the past year; and several debts, previously considered doubtful or bad, have been recovered, and the securities held by the bank are also improving in value.

The attention which has been given to the reduction of the bad debt account, and the conduct of the general affairs of the bank in the colonies, during the past year, reflects the greatest credit upon our inspector and the other officers of the bank.

James John Cummins and Charles Edw. Mangles, Esqrs., two of the present directors, retire by rotation, and offer themselves for re-election at the general meeting.

The directors now proceed to submit their annual statement of accounts—the general result of which enables them to declare a dividend, at the rate of 6 per cent. per annum, on the entire paid-up capital of the bank, to be payable in London on the 2d of August, and in the colonies as soon as the inspector shall fix after the receipt of advices.

General Statement of Accounts, London, June 30, 1847.

LIABILITIES.

Bills payable		£44,743 1 10
Sundry balances		4,637 0 11
Reserved fund (10 per cent.)	£50,008 11 5	
Profit and loss	37,677 10 11	87,686 2 4
		£137,066 5 1
Paid-up capital		820,000 0 0
Total		£957,066 5 1

ASSETS.

Branch accounts (balance)	£392,531 3 5
Bills receivable	32,832 0 3
Investments, Government stock, and loans on security	521,206 4 10
Insurance, open policies, &c.	3,751 8 4
Cash	6,743 8 3
Total	£957,066 5 1

STATEMENT OF PROFITS.

Balance of undivided profit, at June, 1846		£ 44,822 7 6
To which add profits for the year ending, at the branches, 31st Dec. 1846, and at the London office, 30th June, 1847		£57,037 10 5
Less amount transferred to cover total ascertained loss on bad debts to above date	10,309 10 11	
	£46,727 19 4	
Deduct one-tenth for reserve fund	4,672 15 11	42,055 3 5
		£86,877 10 11
Deduct dividend paid at Midsummer, 1846	£24,600 0 0	
Ditto Christmas ditto	24,600 0 0	49,200 0 0
Balance of undivided profit at this date		£37,677 10 11

RESERVE FUND.

At June, 1846, as per statement	£45,335 15 6
Add to June, 1847, as per contra	4,672 15 11
Together	£50,008 11 5

Not included in above amount of undivided profit, and held in addition thereto.

On concluding the report, the CHAIRMAN said, he wished to make a few remarks upon the accounts before sitting down, in order that any gentleman present might have an opportunity of making inquiries respecting them. They would see that the balance of undivided profit in June last was put down at 44,822*l.* 7s. 6d.; but if they turned to the report of that date they would perceive that there was an uncovered balance upon the bad and doubtful debts then of 24,559*l.* 3s. 5d., stated to remain as a charge upon the balance of undivided profits. All of that sum, which had been deemed bad in the colonies, had been written off and placed to the debit of the London account, leaving the present sum of 11,708*l.* 16s. 7d. as the charge against the balance of undivided profits. (Hear, hear.) The inspector had thought it wiser to ascertain at once what was the utmost loss which had really taken place, and to charge the London office with it. The present amount of undivided profits was 37,677*l.* 10s. 11d., irrespective of the 50,008*l.* 11s. 5d. reserved fund. (Hear, hear.)

Mr. WILSON observed that it had been mentioned that last year there had been a sum of 24,559*l.* 3s. 5d. set apart to meet contingencies, such as bad and doubtful debts, &c.; he wished to know why that sum had not been brought forward in this year's account?—The CHAIRMAN replied, that if the hon. proprietor would refer to the accounts of last year, he would see that the sum which he mentioned was one of 28,142*l.* 9s. which remained to the credit of the bad debt account; that the sum of 24,559*l.* 3s. 5d. mentioned in the last report, remained over and above that sum, as uncovered balance; that now, all that was found bad of the two sums put together, was wiped off by deducting from this year's profits, the sum of 10,309*l.* 10s. 11d. After applying these two sums of 28,142*l.* 9s. and 10,309*l.* 10s. 11d., there still remained an open balance of 11,708*l.* 16s. 7d. which must be considered doubtful, and any loss upon which would fall upon the balance of undivided profits.

After one or two remarks, with reference to the disbursements, Government stocks, and loan securities, to which he received satisfactory replies from the chairman, Mr. WILSON observed that he did not think any one had the slightest reason to complain, and his only object in asking questions was for the satisfaction of the proprietors. (Hear, hear.)

Mr. LEVY said he thought the best way would be in future always to state the particulars of securities held, whether they were 3 per cents. or 3½.

Mr. H. BUCKLE thought they were indebted to Mr. Wilson for eliciting information, which went to show that the report was highly satisfactory and deserving of the approval of the meeting. He would, therefore, move that it should be adopted, and printed for circulation among the proprietors. (Hear hear.)—Mr. WILSON seconded the motion, which was carried unanimously.

Mr. Cummins and Mr. Mangles were then re-elected directors, by the unanimous vote of the proprietors.

Mr. CUMMINS said, that in the absence of his colleague he was sure that he might express the gratitude which they both felt for the mark of confidence just bestowed on them. Looking at the 10 years' experience which they had now nearly completed, and which would be the subject of the report at the next annual meeting, and the circumstances which had attended the career of this bank, he believed he might say that they had gone through as much trouble and difficulty as any bank had ever been exposed to. They had passed through a period of strong excitement, of high prices; a period of extraordinary depression of trade, and loss in the colonies; they had gone through it all; they had cleared off their bad debts, paid good dividends all through, and ascertained their loss to have been not more than about 60,000*l.*—at the same time they found themselves with a clear surplus of nearly an equal amount, as well as the growing profits of the present year. He thought, therefore, that with such a result, he was fully entitled to congratulate the proprietors upon the prosperous state of their affairs. (Hear, hear, and applause.)

In answer to a question from Mr. English, the CHAIRMAN said, that they did not intend to oppose the South Australian Company. They were not willing to enter their territory until they had the full consent of the board of directors of that company. The trade of Adelaide, however, was growing so important that he thought the South Australian Company would see the advantage of inviting this bank to join. (Hear, hear.)

Mr. LEVY: I hope you will endeavour to get the charter you have so long been talking of when you do that. (A laugh.)

Mr. BORRADAILE then proposed a vote of thanks to the chairman and directors; and, in doing so, observed that they ought to be grateful to the board for the manner in which they had discharged their duties during the last nine years. He had always had full confidence in them, and he hoped they might be enabled to lay before the meeting next year a still more satisfactory report than this year. (Hear, hear.)—Mr. R. A. COWARD having seconded this resolution, it was carried with acclamation; and the meeting then broke up.

COMMERCIAL BANK OF LONDON.

The seventh annual meeting of this company took place at the establishment, in Lothbury, on Tuesday, the 20th inst.

RICHARD WALKER, Esq., M.P., in the chair.

The CHAIRMAN said, he had very few observations to make previously to the report being read, which he trusted would be satisfactory. The directors considered that the banking concerns of the past year had been fair on the whole, when compared with the other establishments around them. He hoped, therefore, the report would be satisfactory to the gentlemen present.

Mr. CUTBILL (the manager) then read the report and balance-sheet.

REPORT.

The directors, in placing before the proprietors the seventh annual statement, have much pleasure in congratulating them on the continued prosperity of the company, notwithstanding the depressed state of commercial and monetary affairs during the past year.

By the accompanying balance-sheet, it will be seen that, after writing off all bad and doubtful debts, and paying the charges and current expenses of the past year, the net profits amount to 13,878*l.* 2s. 10d. Out of these profits a dividend, at the rate of 6 per cent. per annum, for the half-year ending 31st December, 1846, has been already paid; and the directors have now the satisfaction of declaring a dividend for the half year ending 30th June, 1847, at the same rate, and, as usual, free from income tax.

After paying this dividend, and allowing for rebate of interest upon current bills, there will remain the sum of 4473*l.* 19s. 7d., to be added to the reserve fund, increasing that fund, with the additions made during the year, to 14,825*l.* 5s. 8d.

Commercial Bank of London—Balance-Sheet, 30th June, 1847.

Capital subscribed, 641,460*l.*—Capital paid up			£128,280 0 0
Guarantee fund, invested in 3 per Cent. Reduced Stock			10,351 6 1
Balances due to customers of bank			409,926 13 4
Balance carried down, after deducting bad and doubtful debts, and paying all charges and current expenses			13,878 2 10—£562,435 2 3
Cash in hand, Government securities, bills discounted		£558,435 2 3	
Value of banking premises, fittings, and furniture		4,000 0 0—£562,435 2 3	
Dividend, at the rate of 6 per cent. per annum, for the half-year ending 31st Dec., 1846, already paid			£3775 19 2
Ditto at ditto, for the half-year ending June 30, 1847			3848 3 0
Rebate of interest on current bills			1779 16 1
Balance carried to the guarantee fund, making that fund now 14,825*l.* 5s. 8d.			4473 19 7—£13,878 2 10

The CHAIRMAN said that, in compliance with the report, the directors now declared a dividend at the rate of 6 per cent. per annum for the half year. If any gentleman had a remark to make upon the report, he should be happy to hear him; and the directors would readily answer anything that might be required, in relation to the bank's affairs.

Mr. HOOPER asked, what amount was carried to the credit of the guarantee fund at the last annual meeting?—The MANAGER replied, that the amount carried to that fund last year was 4410*l.* 7s. 2d., being about the same amount as at present.—Mr. HOOPER asked, if the bad debts had not been rather larger than last year, though the profits were considerably more?—A DIRECTOR said, that they were somewhat more than last year.

Mr. COLLYER rose with much pleasure to move the adoption of the report, and the statement of accounts. It was gratifying for them to observe that, notwithstanding the last year was one of unexampled depression, the profits had not only been maintained, but had increased. (Hear.) Now, comparing the present year with the former one, in which large profits were to be derived from large railway balances, and other resources, he thought there was a still greater cause of congratulation, that the present report exhibited so gratifying a result. With these observations, he would move that the report and statement of accounts be adopted, printed, and circulated amongst the proprietors.—Mr. ROBINSON seconded the motion, which was passed unanimously.

The CHAIRMAN said, the next resolution was for the re-election of the directors, who retired from office by rotation, and who offered themselves for re-election. He would only say that, if they should think them worthy of their confidence again, it would be well merited, for he could assure the meeting that those gentlemen had done their duty to the company.

The following directors were then re-elected *seriatim* and unanimously:—Thomas Barnewall, Henry Cornfoot, Jonathan Hopkinson, and Joseph Underwood, Esqrs.

Mr. COLLETT, M.P., was well convinced that they would never have arrived at their present state of prosperity had it not been for the activity, zeal, and urbanity of Mr. Cutbill, their manager, which was known to every one who came to the bank, and had dealings with that gentleman. (Hear, hear.) He hoped, therefore, that they would be unanimous in voting their thanks to Mr. Cutbill for his services.—Mr. SAMUEL AMORY said, from his position he had ample opportunities of seeing Mr. Cutbill's efforts for the prosperity of the bank, and had great pleasure in responding to all that was said by Mr. Collett, for he thought that a more efficient, more talented, and more zealous officer was not possessed by any other bank. (Hear, hear.)

The resolution was agreed to unanimously.

Mr. CUTBILL said, he rose under feelings of great embarrassment, to return thanks for their kindness. He was bound to say, that from the day he had joined the bank, he had received from the board of directors continued acts of kindness, and which he was bound to acknowledge on this occasion. He hoped he should continue to deserve the good opinion they so kindly expressed that day. (Applause.)—Mr. BLRADEN moved a vote of thanks to the chairman, deputy-chairman, and directors, for the very able and zealous manner in which they had discharged their duties in the past year. No doubt, when they had the pleasure of meeting them again, they would hear of the additional prosperity of the bank. (Hear.)—Mr. COOPER seconded the motion. There was one thing, he thought, they wanted, which was larger premises. (Hear, hear.)—A DIRECTOR: That is a very good fault. (Laughter.)—The resolution was passed unanimously.

The CHAIRMAN returned thanks. He thought they might be satisfied with the position of this bank; for, though it was the youngest in the metropolis, it was not the least successful. (Hear.) The public mind had now got prejudiced in favour of joint-stock banks over the private establishments of the country, so that in future years they might naturally look for increasing prosperity in the former; whilst private banks, instead of growing, must tend to diminish. By the ability of their manager, they had made the best possible of last year, but he hoped the next would be still more successful. The meeting then separated.

MUTUAL LIFE ASSURANCE COMPANY.—The half-yearly meeting of this society was held on Wednesday last, July 21st, at the King's Head Tavern, Poultry, for the purpose of receiving the report of the auditors on the receipts and disbursements for the six months ending 30th June; and for the election of five directors and one auditor, who went out of office by rotation.—F. S. STOKES, Esq., took the chair.—The report of the auditors was received and adopted.—The directors who retired were re-elected, and also the auditor.—A vote of thanks was unanimously passed to the directors, and to Mr. Hardy (the actuary), when the meeting adjourned.

THE MAESTEG IRON-WORKS.—These comparatively old established works are probably destined once more to change hands. About five years since, the works in question were purchased by the present proprietors, under circumstances, it was said, extremely favourable to the latter, the price of iron being at that time so low, that the attention of capitalists was directed to other, and as it was then considered, more profitable channels of investment. However, subsequently to the period we have named, a reaction in the trade took place, and the upward tendency of the markets, with other considerations, induced the proprietors of the Maesteg Iron-Works to enlarge, on a somewhat extensive scale, those interesting works. In addition to two blast-furnaces, and also a new blast-engine, together with its several appurtenances, were erected; whilst in the mineral department, fresh cuttings, new tram-roads, with a succession of inclines for the conveyance of iron ore and coal from a hill of considerable altitude, at the foot of which the works are situated, were constructed. Improvements so important, necessarily required a large outlay of capital; and, we are told, that between 40,000*l.* and 50,000*l.* were expended in effecting those improvements; and these being the oldest established works in the neighbourhood (having been erected, we believe, in 1827), and a large number of persons having been in the employ of those gentlemen who have been successively the proprietors of the Maesteg Works, there is naturally a strong feeling of attachment entertained by those persons for what they term "yr hen waith." The result of the approaching sale of the property is, therefore, looked forward to with a more than usual degree of interest, and several gentlemen, already connected with the iron trade, are spoken of as likely to become purchasers of the works; and as additional facilities for the transit of iron, &c., will be presented by the formation of the South Wales and Llynyi Valley Railways, a smart competition is expected.—*Merthyr Guardian.*

SIR W. BURNETT'S PROCESS FOR PRESERVING TIMBER.—A powerful cylinder, hermetically closed, of Sir W. Burnett's construction, has been laid down, adjoining the saw-mills in Woolwich Dockyard, which will admit the largest description of timber for the purpose of having the moisture extracted, and the pores filled with chloride of zinc for preserving the wood from dry rot. The cylinder is upwards of 80 ft. in length, and 6 ft. in diameter inside. The power is hydraulic pressure.

TRANS-ATLANTIC SPEED.—The Norwich steam-boat train ran 66 miles in 1h. 52 min., including three stoppages. This is nearly 40 miles an hour. The engine which performed this feat is called the *Col. De Witt*, built by Rogers, Ketchum, and Grosvenor, of Patterson, New Jersey, and is said to be one of, if not the very fastest, machines ever built in the United States.

SIR C. LEMON ON REPEAL OF THE COPPER ORE DUTIES.

[Concluded from last week's Mining Journal.]

I now turn to the memorials to the Board of Trade, which are remarkably deficient in dates, and a large portion of their documents are anonymous. I need not say much of them, as they nearly resemble the petitions, and are, in some cases, copies of them. I have already answered most of their topics, or have put into your lordship's hands the materials which will enable you to frame your answer.

With these memorials are copies of those which were circulated in 1845; rather indiscreetly, as I imagine, bringing again into view the predictions of that time, which the subsequent two years have completely falsified.

Then follow some more memorials of the present time; ending with one from the directors of the Copiapo Mining Company, dated January 16, 1847. They complain of the injury which they experience from the duty, and say, that under the present system their property has been greatly deteriorated. I beg your lordship to look at the general statement in page 19, of Copiapo ores sold in 1845 and 1846; and the value thereof. You will there see that the quantity of ore sold on account of the Copiapo Company was greater by 50 per cent. in 1846 than in 1845, and their value had increased in a still greater ratio; and such is the history of this deteriorated property.

With such careless inaccuracies the memorials abound; and when pointed out, I have no doubt that they will leave on your lordship's mind the impression that the statements of the memorialists must be received with great caution. I could multiply proofs of such rashness from every page of the memorials; but I am content to rest the case on the three following sentences.

1. "That the price of copper has maintained a high range for the last two years."
2. "That the evil effects of the duty are further and most conclusively shown by the serious falling off in the importation of South American copper ores."
3. "That the British copper mines never were more prosperous."

In reply to these assertions, I refer your lordship to the tables in pages 29, 12, and 11, where the facts sufficiently explain themselves: and they are these.

Prices, till within the last six months, have been unusually low for several years. The importations from South America have been unusually large; and the Cornish mines alone have fallen off in their production to the amount of 1032 tons of copper, and 123,000*l* in money. It is hardly worth while to notice the statement that the duty on copper ore imported equals 25 to 28 per cent. of its net value. If it were so, the Chilians would have a right to complain, because the duty would then exceed the general rate of their *ad valorem* duties on English articles imported.

But is there any ground for this assertion? Your lordship shall see. The duty of 6*l*. per ton of copper in ore is equal to 30*s*. on a ton of ore containing 25 per cent.; and this is about the average per centage of the ore brought home from Chili. Mr. M'Gregor informs us that the price of a ton of such ore, free on board at Valparaiso, ranges from 10*l*. 16*s*. to 12*l*., and that the average freight to Swansea is 5*l*. 12*s*.—making altogether about 17*l*., at Swansea; and from this price to 20*l*., your lordship will find that ores of 25 produce are in the habit of selling at Sanswea. Now, 30*s*. on 17*l*. is about 9 per cent., and not as is at random stated in the memorial 25 to 28 per cent. Again, what shall we say of the spirit of fairness which, to prove that the importation of foreign ores has a tendency to render prices steady, compares the fluctuations of 20 years and 13 years with those of two years? (Memorials, p. 23.) If this comparison has any force at all, it would go to prove that the tariff is good, because the last two years named are within its limits.

It would be endless to follow all the intricacies in which the memorialists have involved their case; but I must, in concluding my remarks, notice one argument which I think rather casts a shade on the good faith of the parties, and savours of an intention to make you read in one sense what they have written in another. It is said, and often repeated in the same or very similar terms, that, "on the change of the tariff in 1842, a duty was for the first time imposed on the importation of copper ores. Can your lordship understand this phrase in any other sense than that previous to 1842 there was no duty on the importation of copper ores?

But in that sense it is absolutely false. Copper in every shape has always been subject to a duty; and the single effect of the tariff of 1842 was to reduce a prohibitory duty to one admitting of large importation. There is, indeed, a narrow plank by which some (not all) of the memorialists may step over this fallacy: but it is by the sacrifice of their argument; for if they say that the tariff, by means of an import duty, for the first time has taxed an article exported, they are right with respect to copper; but how does that help their argument, that the "duty is pernicious to the manufacturing trade of this country?" Surely they do not mean that the foreigner should be exempted from the duty paid by the consumer at home; and yet this is the only part of the duty which is new, and in which the tariff did not operate as a relief.

It is no answer to this to say, that both classes of consumers ought to be relieved. I am not now talking of what ought to be done, but pointing out a latent deception in an argument which has been brought before the Government.

Even in the modified sense it is not correct to say, that the tariff "then for the first time imposed a tax upon the foreign trade of this kingdom," as is stated in another of the memorials. Every article subject to an import duty, on which the drawback has not been fully equal to the duty, is, or was, in the same predicament: even beer exported stands in the same relation to the malt duty.* And, as to the expression that "the repeal of the duty on copper ore would place our manufacturers on a footing of equality with their rivals," I am really at a loss to attach any meaning whatever to the sentence.

I have now, I trust, said enough to convince your lordship that caution must be used in adopting the cry for the abolition of a duty, which I am firmly persuaded does harm to no one branch of our prosperity, and brings 50,000*l*. or 60,000*l*. to the Exchequer. I do not conceal my impression that the fears of those who cling to the duty are somewhat exaggerated; but the pleas of those who argue for its repeal are magnified tenfold. Increase is set down as diminution; bare experiment as established success; and a whole phantasmagoria of terrors is conjured up to frighten those whose duty it is to sit calmly in judgment on a grave and important case. France and the United States have made their trials, and in both countries the tendency is to contract their view to their domestic supplies of ore. Chili may, and will always, smelt largely; the more largely in proportion as the increased quantity of ores sent here, enables them to obtain easier freights for coals and bricks; but the correspondence connected with the memorials, shows that wood is failing in Chili, and that coal from hence must always be comparatively dear. It is the opinion of every one that the mines of Chili, including Copiapo, are likely to become much more productive, and that we shall receive greatly increased supplies from thence: and if, in the mean time, the mine of Cuba, and England, and Ireland should continue in their depressed state, the cause of their diminished produce can no more be attributed to the tariff of 1842, than can the failure of the potato crop be accounted for by the repeal of the corn laws. It is as illogical to say, *post hoc ergo propter hoc*, in the one case, as in the other. I remain, my dear Lord, yours very faithfully,

Charles-street, Berkeley-square. C. LEMON.

* I suppose it will hardly be contended, that because a duty is collected by the Excise instead of the Customs, its effect on foreign trade is different; nor can it be said that the drawback of 5*s*. on a barrel of beer containing 36 gallons, is in any degree a compensation for the duties on malt and hops in respect to that beer.

THE COPPER DUTIES QUESTION.

TO THE EDITOR OF THE CORNWALL ROYAL GAZETTE.

SIR,—Mr. Muntz brought forward in the House of Commons, on the 22nd June, his motion, which, however worded, has for its direct object the absolute repeal of the duties upon copper ores. The proposition was negatived by a majority of more than three to one, as might have been expected, where the interests of the country at large, not less than those of the county of Cornwall, were involved in the issue. I will, therefore, leave Mr. Muntz for a time, offering him all the condolence to which I think him entitled upon his defeat; and will proceed to redeem my pledge of examining in detail the answer of the committee of Liverpool to the statement of Sir Charles Lemon, as contained in their letter addressed to the Earl of Clarendon, the then President of the Board of Trade. I fear, however, that the task will be much less adequately performed than it would have been, had the Hon. Baronet himself applied his talents, information, and acute reasoning powers, to the subject.

In a former communication, I designated the committee's letter "as a precious specimen of cunningly-devised special pleading, mystification of facts, and clumsy defence of many of the previous productions of the same parties." I wish I could consistently withdraw that description of a document that betrays, under much plausibility of style, a strong consciousness of innate weakness; which is sought to be covered by assertions of a most spurious and delusive character; and by imputing to Sir Charles Lemon incorrectness and exaggeration of statement, in his letter to the same noble lord.

In order sufficiently to fix upon the Liverpool committee, that inaccuracy and exaggeration with which they have thus charged Sir Charles Lemon, it will be necessary to extract, in words or substance, those portions of the Hon. Baronet's letter, upon which they have founded their attacks, together with their specific commentary thereupon.

The first attack upon Sir C. Lemon's statements follows the quotation of two short expressions from his letter; in one of which he says, "I do not conceal my impression, that the fears of those who cling to the duty are somewhat exaggerated." And in the other, speaking of present destitution in Cornwall, and the apprehension of its increase, he observes, "I do not say that the duty upon copper ores will, necessarily, produce this effect." These are the only two remarks in Sir Charles Lemon's letter which, in the slightest degree, qualify his sentiments upon the general impolicy of the proposed measure; and even these expressions, taken with their context, would convey an impression altogether different from the construction put upon them by the committee, when they choose to infer that, in the opinion of Sir C. Lemon, "it is a matter of much doubt, whether the repeal of the duties would have an injurious effect upon the mining interests of the constituency of West Cornwall." Upon this forced and unnatural construction of Sir Charles Lemon's language, in the only portion of his letter to the noble President of the Board of Trade, occupying 35 pages, which does not partake of the nature of almost unqualified condemnation, have the Liverpool committee grafted an assertion, "that there is the less reason for refusing a concession; which, they maintain, is essential for the preservation of so important a trade."

The committee next proceed to prove the selfishness which governs their proceedings, by charging upon Sir Charles Lemon that "he appears to think it exceedingly unreasonable that they should complain until they have quite lost the trade, and other countries have possessed themselves of it." And, again, that "trade is not easily diverted from an accustomed and well-worn channel, into a new direction." [page 5.]

This style of argument comes well from people who have, by their own showing, accomplished, within a very limited number of years, the diversion of the very trade under consideration from, at least, two "accustomed and well-worn channels, into new directions"—viz.: into those directions calculated to serve their own interests. I need not travel out of their own recorded admissions to show in the first instance, that Chili did, for a long series of years, smelt largely of copper; demonstrating, by reference to that instance alone, how easily diversions of the nature alluded to can sometimes be effected. I will prove a second case by turning, for a moment, to the evidence taken before the select committee on navigation laws; of which committee, its constitution, and its proceedings, more hereafter.

Mr. Edward Budd, on the 20th April last, in answer to a question put by the sapient and patriotic mover for that committee—"was not the smelting trade of copper confined almost entirely to this country before 1842?"—says, "With the exception of a few works in Germany, and one in Norway and Sweden, works established near the parts where the ore was produced, and where wood was used, the smelting was entirely confined to this country from the period when the importation of foreign copper ore into this country commenced. It commenced about 1828, but about 1830 practically; the first import of foreign copper ores, was, however, in 1828; there was, previous to that, a large smelting trade in Russia, the place which produced the ore, and a great quantity of copper was sent every year from Russia, chiefly to France. *In the course of a very few years after we received the copper ore from abroad, we drove Russia entirely out of the French market, and Russia has now ceased to be an exporter of copper to France. I should suppose that, at one time, Russia exported* 6000 *tons of copper a year to France.*" [Question 2843.]

"Was that from copper ore which was produced in Russia?—Yes." [Question 2844.]

Now, here is the diverting of a trade from its accustomed channel with a vengeance. And what the committee call the diminished export of copper from this country to France, during the year 1846—arising, probably, among other causes, out of the excessive export of some previous years, and of which, by Mr. Budd's showing, we had thus wholly deprived Russia—was still 4535 tons; while, in the year 1830, referred to in Mr. Budd's answer, above quoted, the total quantity of copper of all sorts exported from this country to France was 402 tons, or less than 1-11th part of the export of last year, alleged to have suffered so large a diminution; and, three or four years before that, it was only 10 or 12 tons; but an increase of above 1000 per cent., in the trade with France, from 1830 to 1846, does not seem to satisfy the views of smelters and their mercantile friends.

With such singular evidences as those above given, offered in justification of the strong grounds of alarm put forward by the committee, with regard to the actual or anticipated loss of their trade, it will not surprise any one to read the next paragraph in their letter, which is worth copying at length. They go on—"We have stated that Sir C. Lemon does not advance any grounds for the maintenance of the duties as essential for the protection of any British interests; except, indeed, we regard in this light his allusion to it as a desirable addition to the revenue; which, however, we look upon merely as an invocation for aid to the Chancellor of the Exchequer, who, in a time of less pressing emergency, would, we are sure, be quite beyond the reach of so paltry a consideration as that of a steadily decreasing revenue, now amounting to 50,000*l*. a year only, obtained by the sacrifice of important trading and manufacturing interests—whilst, indirectly, by discouraging the export of our manufactures, and diminishing the employment of our people, a great and permanent loss of revenue will undoubtedly be occasioned. Neither does he attempt to dispute the injurious effects which the establishment in other countries of the smelting of the foreign copper ores would have upon the interests of the British miner; and it is unnecessary, therefore, to enlarge here upon a branch of the subject, with the bearings of which your lordship and the Government are already acquainted."

The leading points in this paragraph, from first to last, are mere assumptions—false premises lead to equally erroneous conclusions. The allegation that Sir Charles Lemon does not advance any grounds for the maintenance of the duties, as essential for the protection of any British interests, is wholly destitute of solid foundation; but I might be content to let that pass, and proceed at once to the antitheses of the remaining part of the sentence. The revenue derived from the copper duties, which is called in one line "a *paltry* consideration of 50,000*l*. a year" (the amount of last year's duties was 54,383*l*.), we are told, in the next, is obtained by the sacrifice of important trading and manufacturing interests, the discouragement of the export of our manufactures, and a diminution of the employment of our people, involving a great and permanent loss of revenue. We might apply to this reasoning the well-known line—

"My wound is great, because it is so small;"

and appropriately add—

"Then 't would be greater, were it none at all."

But the committee well know, whilst publishing what every careful reader of such language must pronounce to be arrant nonsense, that the consequences so pompously put forward are mere assumption, unsupported by a word of sound reasoning, or a single sustaining fact; and that they constitute, in reality, the very point at issue. Whether these assumptions, as regards the amount of our trade with the copper-producing states, can be at all borne out by the facts of the case, will soon be set at rest, with reference to by-gone transactions; since the official returns of our general trade with those countries will shortly be upon the table of the House of Commons, having been moved for some weeks ago. But that the diminution of the employment of our people should be advanced in support of the committee's views, is really almost too ludicrous to call for serious refutation. It is quite true that a few hundred miners, who have been inveigled into engagements to go and assist in the working of foreign mines, in many cases to their own subsequent deep regret—some of whom have left their families in England, chargeable on their parishes—and a score or two of merchants, who constitute the body represented by the Liverpool committee—and who, naturally enough, sign petitions and adopt other measures, in support of a system likely to advance their personal interest—together with the little knot of six or eight *soi-disant* free trade (query—monopolising) smelters, might, by the loss of that branch of their trade, suffer something in a peculiar sense. But, is there to be no consideration for the thousands of Cornish and other miners, with their families, and the numerous other classes dependent upon them, who rely for their very existence, upon the successful working of our own copper mines?

If conflicting interests are at stake, then, upon every principle of sound national policy, throw them into opposite scales; and if sacrifice there must be, let that interest which kicks the beam be the one sacrificed. Which of the two that would be, cannot be matter of question. I have, however, yet to learn that any interest will be seriously prejudiced by perseverance in the present course of policy. Where is the evidence of such a state of things? I will endeavour to place that question on its right footing, by stating the amount of imports of copper ores from all parts of the world, for the four years preceding, and the four years subsequent to the year 1842, when the duty was first imposed; showing the relative state of the imports within those different periods; first, as regards the total quantities imported from all parts; and then, with respect to the quantities severally introduced from Chili and Cuba. Taking 1842 as the medium term, I find that the total importation of copper ores in that year was 49,856 tons.

In 1838 it was	*Tons* 26,917	} Total quantity in these four years, 147,465 tons—36,866 average.	
1839	30,001		
1840	41,950		
1841	48,597		
1842	—		
1843	56,720	} Total quantity in these four years, 222,445 tons—55,611 average.	
1844	58,409		
1845	56,697		
1846	51,623		
Total in eight years	369,910 tons.		
Average per annum	46,339 tons.		

It will be seen, then, that the importation of the last year exceeded that of 1842 by 1767 tons. It exceeded the average of the whole eight years by 5384 tons; and the average of the four years preceding 1842 by 14,757 tons.

There is surely nothing here to warrant the assertion that the general state of the trade is one of rapid decline; the fluctuations of the last two or three years not being greater than those which continually occur in every department of commerce or manufacture.

Let us, then, see how the intercourse with Chili and Cuba has stood, during the same period of time. And, first, for that of Chili:—

The importation from that country, in 1842, was 12,643 tons.

In 1838 it was	*Tons* 12,993	} Total quantity in these four years, 43,331 tons—10,833 average.	
1839	9,133		
1840	10,319		
1841	10,886		
1842	—		
1843	19,829	} Total quantity in these four years, 63,783 tons—15,946 average.	
1844	19,569		
1845	10,823		
1846	13,565		
Total in eight years	107,114 tons.		
Average per annum	13,389 tons.		

It will be seen here, that the importation of last year exceeded that of 1842 by 922 tons. It exceeded the average of the whole eight years by 176 tons. And the average of the 4 years preceding 1842 by 2732 tons.

So with Cuba. The importation from thence, in 1842, was 32,270 tons.

In 1838 it was	*Tons* 7,485	} Total quantity in these four years, 83,734 tons—20,933 average.	
1839	17,302		
1840	26,288		
1841	32,659		
1842	—		
1843	31,683	} Total quantity in these four years, 139,554 tons—34,888 average.	
1844	34,764		
1845	41,341		
1846	31,766		
Total in eight years	223,288 tons.		
Average per annum	27,911 tons.		

Showing that the importation of last year fell short of that of 1842 by 504 tons, a solitary instance of diminution in all these averages, being to the extent of 1½ per cent. But the import of last year exceeded the average of the eight years by 3855 tons, and the average of the four years preceding 1842 by 10,833 tons.

These are all figures which the committee must well know to be founded on official returns, and that they are above all cavil; and I may ask, if this state of things warrants the language employed by them, in the above quotations from their letter?

With regard to the committee's assertion, that Sir C. Lemon does not "attempt to dispute the injurious effect which the establishment in other countries of the smelting of the foreign copper ores would have upon the interests of the British miner," I am unable to discover where Sir Charles has introduced that subject in a way to admit of such a distorted view. True it is that he has shown, and, in my judgment, shown most clearly that there is nothing in a 7, or even a 9 per cent. duty upon foreign ores—and the latter is the maximum rate imposed, however computed—which can warrant a supposition that any foreign state will be able to compete with a Swansea smelter in his operations. If, for fiscal purposes, foreign states should tax pig or sheet copper, and in the vain hope of competing with us in the production of those descriptions from the ores, they think it right to admit the latter free of duty, such a course cannot surely justify a demand upon our own Government to abandon, at once, both the revenue derived from that article, and the trifling protection which it affords to native industry: a combined principle which pervades our revenue system; and for the abandonment of which no sufficient precedent can be drawn from our own tariff; and, least of all, as I have already shown in a former letter, from those of the countries furnishing supplies of copper ores.

Among the bugbears, upon this point, conjured up by the committee, is the establishment, in the United States, of two smelting-houses; and, although this menance has been already shown to be sufficiently harmless, it may be well again to advert incidentally to the fact, in order to reassert that which is well-known to those who have, on repeated occasions, forced the question upon our notice—that, up to the present time, there is nothing to justify alarm upon that score. And, as is equally well known to the same parties, the grounds of failure will prove to be threefold: the cost of the fuel—its defective properties for the purposes of smelting—and the mode adopted in carrying on the process. These short definitions will be all understood by the practical portion of the advocates for the repeal of the duty. With reference to this branch of our export trade, I will follow the course adopted above with regard to imports, and show what has been the nature of our connection with that country for the last nine years. The export of copper from this country to the United States was, in 1842, 934 tons.

In 1838 it was	*Tons* 1465	} Total quantity in these four years, 4897 tons—1224 average.	
1839	1322		
1840	1069		
1841	1041		
1842	—		
1843	1463	} Total quantity in these four years, 8018 tons—2004 average.	
1844	2145		
1845	2219		
1846	2171		
Total in eight years	12945 tons.		
Average per annum	1614 tons.		

We have here extraordinary evidences of the alarming change in the state of our relations with the United States in copper, so strongly dwelt upon by the committee, in the facts, that the export of last year exceeded that of 1842, by 1237 tons. It exceeded the average of the whole eight years by 557 tons, and the average of the four years preceding 1842 by 947 tons. The increase from 1842 to 1846 being no less than 132 per cent.; and the trade of the last appears to be the largest of the whole term of nine years, with the single exception of the preceding year, 1845, which exceeded 1846 by the important number of 48 tons! Thus far, I may venture to maintain, have the Liverpool committee failed to establish a good case for themselves; or, in any degree, of the slightest importance, to invalidate Sir C. Lemon's views of the question. I find, however, that I have only entered upon the threshold of the inquiry which I proposed to make into their letter.

The next point to which the committee address themselves is, the examination of the pleas, as employed by themselves, in their various petitions, and other representations to the constituted authorities of the state, which were condensed by Sir C. Lemon in short and pithy terms, each of them meeting with clear and strong refutation from his pen. The committee allege that these pleas, "as drawn up by Sir C. Lemon, state the case of the advocates of the repeal of the duties in some points incorrectly, in others unfairly, and, as a whole, incompletely." [Page 7.]

As it may be well to show, in consecutive and connected detail, how entirely the committee have fallen short in their endeavours to meet the reasoning of Sir C. Lemon upon the several points adverted to, I will ask your permission to do so in another letter; when I trust I may be able to prove, as clearly as I think the foregoing figures do, with reference to the several instances to which they are applicable, that the remaining arguments of the committee's reply are equally destitute of force and reason.

I will, at the same time, refer to the important and incontrovertible facts embodied in the petitions from the county of Cornwall recently presented to the House of Commons; and I hope to be able to show, by a comparative view of the two cases, and a brief inquiry into the nature and extent of the several interests involved in the issue of this question, how deficient in importance are the foreign, by comparison with the home, interests; and how little solid argument can be advanced by the importers, and their co-interested advocates and associates, in support of the demand for the repeal of the duty, on each or all of the grounds upon which they have rested their pretensions.

London, July 9. Yours, &c., PUBLIUS.

PROGRESS OF THE RAILWAY SYSTEM.

OPENING OF THE SOUTH DEVON RAILWAY FROM NEWTON TO TOTNES.

The public opening of the most difficult portion of one of the most difficult railways in the kingdom—the 8¼ miles from Newton to Totness, on the South Devon line—took place on Tuesday last. The event is an interesting one to the nation, as well as to the railway engineer. This small extension of the line is of moment to the public, because it brings the metropolis, and the whole of the North of England, *viâ* the Bristol and Birmingham Railway, still more closely in connection with the important port and dockyard of Plymouth; and it is interesting to the railway engineer, inasmuch as the 8¼ miles of line in question run through a country, the character of which renders very heavy gradients and curves imperative; and as the imperfect preparations for the application of the atmospheric system of traction, for which both gradients and curve were laid down, have rendered the adoption—but temporarily, it is hoped—of locomotive power necessary. The extension too, carries us more deeply still into the bosom, if not of the sublime, yet of the beautiful scenery of the country, which is favoured with so large a share of "the breath from the sweet south."

The starting of the first train from Newton to Totnes was fixed for 8.50 in the morning. This was the 7.50 train out of Exeter. We did not notice the size of the train that the engine came in with; but the addition of the Newton passengers obliged the use of six carriages in the trip to Totnes: these were well filled, and weighed something beyond 60 tons. This train left the Newton station attached to two engines—one a six-wheel locomotive, with four of the wheels of five feet diameter coupled, cylinder 15 inches, and stroke 18 inches. This was, with its tender, placed next the train; and the other was a six-wheel locomotive, with a six-feet driving-wheel, and same size cylinder and length of stroke. That the working of the engines may be appreciated, and the peculiarity of this part of the South Devon line understood, we give the following list of the gradients:—

FROM NEWTON TO TOTNES STATION.

Length in Chains.	*Gradient.*	*Rate.*
5	Level	—
8	Descent	1 in 264
1¼	Level	—
52	Ascent	1 in 229
27	Level	—
25	Descent	1 in 825
43	Ascent	1 in 97
33	Ascent	1 in 57
15	Ascent	1 in 64
37	Ascent	1 in 47
48½	Ascent	1 in 43
12½	Level	—
58	Descent	1 in 40
33½	Descent	1 in 59
39½	Descent	1 in 89
15½	Descent	1 in 157
41	Ascent	1 in 940
18	Descent	1 in 74
9	Level	—
53	Descent	1 in 124
7½	Level	—
4½	Descent	1 in 69
26	Descent	1 in 202
84½	Level	—

It is here seen, that, for the first 294½ chains out of Newton, the line is, with two or three trifling exceptions, on the ascent; and that it is almost continuously on the ascent, for 330½ chains out of Totnes towards Newton. It is up these gradients that we now give the working of the two engines, with 60 tons each way:—

Started from Newton,	*h.*	*m.*	*s.*	*Time per qr. mile.* *m.*	*s.*	*Miles per hour.*
214 miles	8	57	6	—		—
Missed the 214½, 214¾						
214¾	9	0	15	—		—
215	9	0	51	0	36	25
215¼	9	1	24½	0	33½	26½
215½	9	1	54½	0	30	32
215¾	9	2	26½	0	31½	28½
216	9	2	58½	0	32½	27½
216¼	9	3	33½	0	35	25½
216½	9	4	14½	0	41	22
216¾	9	5	59½	0	44½	20½
217	9	6	55½	0	56½	16
217¼	9	8	34½	1	38½	9
217½	9	10	20	1	45½	8½

The summit level is in a short tunnel, which lies between the 217¼ and 217½ mile posts. The following is the working up the gradients from the Totnes station to the tunnel. The load was about the same (60 tons), and the same two engines were employed; but in this trip, the coupled engine was made the leading one:—

Started from Totnes	*h.*	*m.*	*s.*	*Time per qr. mile.* *m.*	*s.*	*Miles per hour.*
	10	28	20	—		—
222¼	10	29	56	—		—
222½	10	30	41½	0	45½	20
222	10	31	17½	0	35½	25½
221¾	10	31	49½	0	31½	28½
221½	10	32	20	0	30½	29½
221¼	10	32	51	0	31	29
221	10	33	21½	0	30½	29½
220½	10	33	52½	0	31	29
220¼	10	34	23½	0	31	29
220¼	10	34	53	0	29½	30½
220	10	35	21½	0	27½	33½
219¾	10	35	37½	0	25½	35½
219½	10	36	12½	0	25½	35½
219¼	10	36	40½	0	28	32
219	10	37	10½	0	29½	30½
218¾	10	37	41½	0	31½	28½
218½	10	38	13½	0	32	28
218¼	10	38	54½	0	40½	22
218	10	39	47½	0	42½	21
217¾	10	41	50½	1	3½	14

It will be seen, that while the lowest rate of speed in ascending from Newton, where a rising gradient of 1 in 43 for 48¼ chains succeeds 37 chains of a rising gradient of 1 in 47, was 8½ miles per hour; the minimum rate of speed in ascending from Totnes, where 58 chains of a rising gradient of 1 in 40 has to be reached by 30½ chains of a rising gradient of 1 in 89, and another rising gradient of 33¼ chains of 1 in 59, was 14 miles per hour.

There is scarcely a furlong of straight road in the 8¼ miles between Newton and Totnes. The section, which is admirably constructed, is, in fact, one series of curves, over which any thing approaching a high descending speed, running, as the engine and train of course do, down these gradients by their own gravity, would be rather hazardous. Indeed, we are inclined to think, that, extraordinarily heavy as these gradients are, there will be very little difference between the average velocities *up* and the average velocities *down* them.

The weather during the day was delightful, and the many beautiful and occasionally magnificent views that are to be had from this section of the line, were seen to the best possible advantage. The inhabitants of Totnes made a perfect holiday on the occasion. The majority of them appeared to have congregated at the station, where carriages bedecked with evergreens, flags, and a brass band, enhanced the pleasure with which they hailed the extension of the line to the town.

The chairman (Mr. Gill), several of the directors, Mr. Barlow (one of the directors of the Great Western), Mr. Brunel, Mr. D. Gooch, Mr. Hennet (the contractor), Mr. Glennie (the resident engineer), and Mr. Rea (the locomotive superintendent), went down with the first train in the morning. We received from Mr. Brunel, Mr. Hennet, and Mr. Clarke (the superintendent of the railway), every facility in passing over the section between Newton and Totnes on the previous day. We perceived that the short tunnel between the 217¾ and 218 mile posts, the only one in the 8¼ miles, has been made wide enough for a double line of rails.—*Morning Herald.*

STRIKE OF THE MINERS IN SCOTLAND.—During the past week, the miners in Scotland, principally in the Ayrshire district, have struck work, in consequence of which, about 6000 men are thrown out of employment. When the price of iron got up to the high rate it reached about two years ago, the men demanded, and got, a great increase of wages; but, since the masters have been realising less extravagant prices for their iron, they have become dissatisfied with the high wages paid to their men, and, for some time, have been wishful for a reduction. There has, we believe, been another cause of contention between the masters and men. The latter, whilst demanding higher wages, refused to work more than four days in the week. This the masters strongly opposed, but had, from necessity, to submit to; and, whilst the demand for iron was greater than the means of supply, the arrangement was attended with a heavy loss to the employers, as well as being inconvenient. After the recent money crisis, the prices of Scotch pig-iron again declined, and the masters then gave their men notice of a reduction in their wages; or, we understand, they gave them an option of working five days in the week, instead of four, leaving their wages as before. The proposed reduction is 1*s*. per day; but, it is stated, that the masters have, in many instances, offered to compromise the matter, offering 6*d*. less, instead of 1*s*., and some even 3*d*. And it is said that the men do not so much object to the reduction of 3*d*. or 6*d*., as that they are afraid of further reduction, if they accede to this. As soon as the men refused to return to their work, they got warning to quit their houses; and above 1000 ejectments have already taken place—many of the men and their families having to encamp on the road-side. This, by some, is considered a harsh (although not an illegal) proceeding on the part of the masters—the men having, in a former strike, been allowed to keep possession of their houses for some weeks after leaving their employment. It does not follow, however, that the course adopted by the masters may, in the end, prove the unkindest to the men. There has been a meeting of delegates from the men; but the meeting was adjourned for a week, without any resolution being come to. One of the speakers amusingly suggested, that Mr. Wilson, the proprietor of the Dundyvan Iron-Works, should "deal liberally by them, or how could they fling up their caps for him at the coming election?" (Mr. Wilson, it is understood, intending to come forward again as a candidate for the Falkirk boroughs).—A meeting of the ironmasters was held on Wednesday, from which a deputation waited on the agent of the Caledonian Railway Company, regarding the alteration of the gauge of the mineral lines, and arranged that such alteration should be gone on with immediately, instead of waiting till August, as was proposed some time since. The effect of this arrangement will be, that the masters will be better able to dispense with the services of their men, as the supplies of mineral for the furnaces will, in a great measure, be cut off by the stoppage of the railways.—*Gateshead Observer.*

ACCIDENTS.

The late dreadful Explosion at Messrs. Hall's Gun-Cotton Factory.—Since the publication of our last Saturday's paper, in which we informed our readers of the destruction of the gun-cotton manufactory, at Faversham, farther particulars have reached us. Messrs. Halls works, it appears, are the largest in the kingdom—occupying the site of above 20 acres. The gun-cotton manufactory is situate in that part known as the Marsh Works, and had formerly been used for the manufacture of powder; they consist of four buildings, numbered 1, 2, 3, and 4; Nos. 1 and 2 are still used for gunpowder, 3 and 4 for gun-cotton; they are all separated by mounds of earth, 40 ft. high, to prevent, in case of accident, one building firing the next. No fire whatever is allowed to exist within the building, and the same precautions are taken with regard to metal buttons, nailed shoes, &c., as in making gunpowder. On Wednesday morning, just previous to the explosion, the works were in full operation; between 40 and 50 persons were employed in the two cotton stoves, and in the steeping department. Nothing appears to have happened to cause any fear or give any warning up to the time of the accident—a quarter past eleven. The effect a few moments afterwards was extraordinary; No. 4 building was literally blown to atoms; of the massive walls not one brick remained upon another, and the earth, to five or six feet in depth beneath the foundation, was torn up and rent in chasms, as if by an earthquake; the materials were thrown high into the air, clearing the 40 feet embankments, and falling in showers at an incredible distance. Not a second intervened from the first explosion, when No. 3 was fired, and exploded likewise, but the chimney is left standing. Nos. 1 and 2 are still standing, but unroofed, and otherwise injured. Many miraculous escapes are mentioned. Mr. William Hall, one of the proprietors, had been, as was his custom, within the factories early in the morning, and was returning, and when only 50 yards from the works the explosion took place. Mr. Day, one of the managers, also had only a minute before left to seek Mr. Hall, and thus escaped destruction. A sad fatality attended one boy; the lads are employed alternately in out and indoor work, and this boy was that morning placed to scare birds from a piece of wheat; but the overseer, having caught him asleep a few minutes before the accident, sent him to the stove, and thus he fell a victim to his drowsiness. Ten of the bodies have been identified; but of eleven who were known to have been present, only fragments of their bodies and apparel have been found, and cannot be identified. Arms, legs, heads, and mutilated portions of the bodies, were thrown in every direction, and, in some places, to an incredible distance. The quantity of dry cotton in the two buildings is said to have been 200 lbs.—representing the force from the combustion of 1200 lbs. of gunpowder. The effects in the immediate vicinity of the ruins are most extraordinary: two acres of a field of wheat are completely blasted; all the buildings within a quarter of a mile are unroofed, or otherwise injured; trees are torn up by their roots, and the whole presents a scene of desolation rarely witnessed. On Friday week, the inquest was held, when, from all the evidence adduced, not the slightest clue could be obtained as to the immediate cause of the accident. Every precaution was evidently taken to avoid danger: the drying-stove of No. 3 was never above 120°, and No. 4, 110° Fah., which a much higher degree would, in the opinion of the makers, have been perfectly safe. The inquest was adjourned to Monday, the 9th August, in order to obtain the evidence of some of the sufferers, who cannot yet be examined. A second inquest was held on the body of George Ransom, who was killed by inhaling some noxious vapours, while assisting to get the bodies; there was a large quantity of nitric and sulphuric acid in carboys on the premises, which were broken by the falling rubbish. The nitric acid, in contact with straw, produced nitrous gas; and the sulphuric acid, in contact with steam, produced sulphurous acid, both of which the deceased had inhaled, and which caused great irritation of the internal texture of the lungs; matter exuded, in consequence of this irritation, and suffocation ensued. The jury returned a verdict of "died from inhaling mephitic vapour." The remains of 19 of the victims were interred in Davington churchyard, close adjoming the works, followed by an immense concourse of spectators. The bodies of Mr. Topping and George Ransom will be interred by their friends.

Frightful Loss of Life in a Belgian Coal Mine.—On the night of the 16th inst., a destructive fire broke out on the premises connected with the Marihaye Coal-Works, near Seraing. It originated in the engine-room near the mouth of the pit, and rapidly spread, catching in its progress, and burning, the ladders and ropes which served for descending into the coal-pit, and thus cutting off for the time all means of escape for 164 workmen who were at work therein; the first signal of their danger was the appearance of dense columns of smoke which came down the mouth of the pit. The workmen immediately rushed to the ladders—but the foremost, after ascending them a short distance, were either suffocated and fell dead to the ground, or killed by the falling of burning materials from the top of the shaft. The fire was, after great efforts, mastered, and a descent into the pit made, when a most frightful sight presented itself—the dead, the dying, and the wounded, lay all scattered about the place; 41 dead bodies were taken out of the pit, and 31 alive, but most of them badly wounded; search was being made for the remainder.

South Australia—Fatal Accident to Capt. Jury.—Mr. W. J. Jury, the agent of the Montacute Mines, with John Baker, Esq., one of the proprietors of the Paringa Mine, paid a visit of inspection to the latter property, distance about 32 miles from Adelaide; on arriving at the principal shaft, they met the captain, Mr. R. Cornelius, and Mr. Allen, when Capt. Jury commenced his descent—John Brown and William Halls being stationed at the windlass, and John Chynoweth working at the bottom of the shaft. The deceased had just been talking with much cheerfulness, and knowing that the shaft was laddered about half way down, briskly turned round by the windlass; and, instead of holding by a stout iron staple placed horizontally for the purpose, seized what is called the stay of the windlass upright, a piece of wood usually of small dimensions placed diagonally, and nailed to the platform and the upright. The ladder was said to have been rendered slippery by the waste water which was being sent up at the rate of 100 9-gallon barrels in eight hours, and the nails of this stay seem to have drawn from their holding—and the unfortunate man, failing to save himself as he tried to do, fell down a shaft of 17 fms. (say 100 ft. deep), striking in his descent a wooden stay-piece, a few feet down, then another stay-piece 4 fms. lower, afterwards the kibbles and water-barrel, and, finally, fell near Chynoweth, at the bottom of the shaft, who picked him up in a lifeless state, and perceived that his skull was so much fractured, that the brains protruded, and death must have been instantaneous. The collateral circumstances of this sad affair possess a melancholy interest. The deceased was the first mining captain who came out to the colony with a special appointment, in accordance with his avocation; and having been allowed to transfer his services from George Fife Angas, Esq., to the proprietors of the Montacute Mine, had continued to serve those gentlemen with a fidelity and zeal, which recommended him to their further confidence; and with a singular fatality, this first miner, whilst in the diligent performance of his duty, has been the first to lose his life. The deceased, who is much and deservedly esteemed, has left a widow, six children, an aged mother, and a brother in the colony, to lament his sudden and untimely fate. The mother and brother had but lately arrived from Tavistock, Devon, in the *David Malcolm*, at the express invitation of their relative.

Coseley.—T. Wilkes was killed in one of Lord Ward's Pits, at Sedgley.

Darley Main Colliery.—Two youths, named A. Hammond and T. Stead, were severely burned by an explosion of fire-damp.

Oaks Colliery.—This colliery had an escape from another explosion on Saturday morning, when the fireman, whose duty it is to go down into the mine before the other workmen, discovered that an accumulation of gas had taken place in the mine, and it was in a dangerous state. On going further into the works to ascertain the cause, he found that one of the trap-doors, which guide the current of air, had been left open, which thus accounted for the accumulation of foul air, and caused the whole of the workmen to have holiday on that day.—*Sheffield Iris.*

Dowlais.—D. Davies was killed by a fall of rubbish in Blaen Ras Colliery.

THE EXPLOSION AT KIRKLESS-HALL COLLIERY.—In the House of Commons, on Tuesday evening, in answer to a question put by Mr. Hindley, with reference to the accident at this colliery, Sir G. Grey regretted to state that the intention which he had formerly announced as having been come to of sending a person on the part of Government to attend the inquest in this case, had not been carried into effect, in consequence of the gentleman in connection with the Woods and Forests, whose duty it was to attend to the order having been absent at the time. He had written to the coroner to explain the absence of any person on the part of the Government, and to inquire whether any further inquiry into the accident by the coroner would take place. He might now state, however, that he had received a letter from a magistrate, which gave a full statement of the particulars connected with the accident. The statement of that gentleman (which the right hon. gentleman read), was in effect that an inquiry had been instituted by five magistrates, who were all of opinion that the explosion was the effect of accident, and caused by one of the workmen themselves, and that every exertion had been made to recover the bodies of those who were left in the pit in consequence of the accident. After full consideration of the case, he (Sir G. Grey), had come to the conclusion that the explosion was wholly accidental, and that everything had been done by the parties concerned which could be expected under the circumstances.

MOSE BRIDGE ACCIDENTS.—An accident resulting from the recent thunder storm occurred on Friday last, by which two bridges connected with the Bodmin and Wadebridge Railway were swept away by the flood. The bridges were those at the junction and the Grogley; and the traffic, in consequence, will be stopped for some time.

DARTMOOR SLATE QUARRIES.—We have heard an extraordinary rumour—that Government are about making a convict settlement at Dartmoor, and to employ the convicts in working the granite quarries; the prisons of Princes Town, it is believed, will be appropriated to the purpose. Dartmoor contains upwards of 254,240 acres, of which only about 1000 acres are in cultivation as arable land.

SOUTH AUSTRALIAN MINES.

ADELAIDE MINING COMPANY.—This company was founded on the 16th May, 1646, by a few gentlemen putting their funds together to purchase the property surrounding the celebrated Montacute Mine, consisting of six sections, or 471 acres, and situate at a distance of 12 miles from Adelaide. The Montacute Company endeavoured, some three years ago, to purchase the above property, but Governor Grey refused to take the amount offered; or, in fact, to sell the land at all, until he had submitted the matter to the Secretary of State for the Colonial Department. The result was, that the property was to be put up at public competition; previous, however, to this taking place the manager of the South Australian Company sought to obtain the land by means of a preliminary land order, which the Government refused to accept, a litigation ensued, and the sale of the property (which had taken place in the interim) to the above company was, of course, undisturbed. The company, on the purchase being made, immediately proceeded to work, and the result was that, at the first half-yearly meeting, 50 tons of excellent copper ore had been raised; but no permanent lode had been discovered. The ore had been sold at a good price—the average per contage being 28. The directors being of opinion that a large deposit of ore could not be at any great distance, directed the captain to prosecute vigorously the workings from whence the principal part had been obtained; and they had the pleasure of hearing that a copper lode, 7 ft. wide, and carrying two good walls, had been hit upon, and from which eight men have extracted 20 tons of very excellent ore during the last fortnight. There is every prospect of another lode being shortly cut in a gallery driving in a shaft below the level of the creek. As soon as this is done the mine will be much more valuable than was expected, as the great depression in the price of the shares of this company has been principally caused by the ore having been found in bells or lumps, without the appearance of proper lodes. Copper ore is also being obtained from a cross-cut in the same section, which has for some time past being driven.

THE RIVERSDOE SILVER AND COPPER MINE.—This property consists of two sections of land, containing 118 acres on the eastern banks of the River Torrens, about eight miles from Adelaide. It was purchased by Messrs. M. Smith and P. Levi, in December, 1845; but owing to the high rate of wages, it has not been regularly worked. A few men have occasionally been employed, who have discovered several good indications of copper, and two very promising lodes, from which a few tons have been taken, of about 40 per cent. produce. Recently, however, a very rich vein of silver-lead, about 14 in. wide, has been found, the metal of which, separated from its matrix, has been ascertained by Mr. Davy, scientific chemist, of Adelaide, to produce 627 ozs., or 39 lbs. of silver to the ton. This is private property.

THE NORTH MONTECUTE MINE.—This mine, belonging to the Victoria Mining Company, is the only gold mine yet discovered in the province. The capital stock consists of 3500 shares. The company have continued to open the ground for the last 10 months with a small party (varying from two to five men), and have now between 2 and 3 tons of auriferous earth, taken from the lode ready to be operated on. The small quantity already cleared up has yielded about 1½ lb. of pure gold, which has been sold to the jewelers in Hindley-street; and from the late reports of parties who have worked gold elsewhere, we are warranted in stating that, with the necessary machinery and capital, it promises a considerable return. Some of the samples of the ore are very rich; but the operations are not of sufficient magnitude to hold out hopes of the shares rising in the same proportion as the Burra Burra; although many respectable parties here, enamoured of gold mines, think no price too extravagant to expect. We are informed, by a gentleman well qualified to pronounce a practical opinion, that on his last visit, he felt that Capt. Tyrrell and his small corps were doing their best, and that the workings exhibited a perfect knowledge of the country; but, without a very much larger body of men, and the proper machinery, the proprietors must be satisfied, at least for some time, with a small return of the precious metal.

THE KAPUNDA MINES.—This, one of the original and richest mines of the province, has yielded large quantities of valuable ores. Latterly the higher levels have only been in work, and the immense beds of copper ore in the lower levels are left until the steam machinery, daily expected from England, is erected, and the water cleared off. It is expected that, within six months, the whole of this mine will be again in full work. One-fourth of this mine was recently sold in England for 14,000*l.*; an immense bargain to the fortunate purchasers, and a much larger sum has been promptly refused for proportionate shares by the principal proprietor. The quantity of ores at present brought to the surface is considerable, and of equal, if not superior, quality to those already sold at Swansea.

BURRA BURRA AND PRINCESS ROYAL MINES.—These mines are upon a special survey of 20,000 acres, distance about 96 miles from Adelaide. This survey was taken in consequence of large masses of copper ore which were discovered upon the extremities of the survey. The proprietors of this survey have secured to themselves the full extent of mineral land, inasmuch as the lodes run longitudinally through the survey. This has been proved by the workings which have been carried on, more especially in the northern half, when the principal lode shows a course of north, about 35° west. The general and almost unparalleled richness, as well as extent, of this mineral property is partly proved in the fact, that during the first year's operations 7200 tons of ore were extracted. Some portions of these being the first shipment, have already been sold in the Swansea market, and realised from 10*l.* 16*s.* to 31*l.* 3*s.* per ton. As these, however, were principally surface ores, and as there existed, during the first year, no available means for their due preparation, such as cleaning and classifying for exportation, the average return has proved more favourable than was expected. The last accounts from Swansea state that the Burra ores are in great favour, in consequence of their great docility in the process of smelting. From the assays, which have been made here, of the generality of ore, the quality has varied considerably; and since the shipment of surface ores had been from 25 to 80. Red oxides, grey ore, blue and green carbonates, and malachite, are the different descriptions of ore which have been extracted; and some specimens of native copper have recently been found. As the workings in the southern half have not been formally carried on to the same extent as in the northern half, the amount of extraction has not been very considerable. All experienced miners, who have visited this district, conclude that, judging from the surface indications, which are very numerous, and the many east and west branches, which join the main lode, some of which are from 1 to 2 ft. and upwards wide, and contain copper ore, which, if well cleaned, would be a good marketable article. This district is the richest that has yet been discovered, and will eventually prove as valuable as the Burra or Monster Mine.

[The *South Australian Gazette*, of the 5th March, states, that "Mr. Paxton has just returned from the Burra Burra Mine, with one or two more magnificent specimens than ever. We have just had the pleasure of examining one of them. It is almost pure copper; and one spot exhibits crystals, which are said to be rubies. We are not lapidary sufficient to pronounce as to the value of the stones: but the amazing richness of the copper ore we can freely vouch for. It is said to be in the ordinary abundance of this great mine, where a lode must be two or three feet wide, at least, to attract notice."]

AUSTRALIAN MINING COMPANY.—This company is founded in England, capital 400,000*l.* Is conducted in the colony by a committee of management, of whom John Baker, Esq., is the chairman. The company is possessed of a special survey of 20,000 acres, called the Reedy Creek Survey; but the mines on it are called the native name of Tungkillo Mines. The operations upon these mines are carrying forward with great vigour, and high promise of success. The company have also about 1000 acres of land adjoining, and in the neighbourhood of, the property of the North Kapunda Company. The ores raised are almost, without exception, blue and green carbonates, and are rich in produce. One of their mines is about 50 miles from town, and the other under 40.

PARINGA COPPER MINE.—This mine is situated on the Bremer Creek, in the county of Sturt, about 33 miles from Adelaide, and is a part of the Mount Barker Special Survey of 20,000 acres, taken in November, 1845. Operations for working this mine were immediately commenced by the proprietors, and have been attended with the most favourable results, large quantities of copper having been already risen and shipped to England; the quality being generally a very superior description of black and grey ores, and in some of the lodes rich oxides of red, green, and bude are found; the undertaking are now being forwarded on an extended and spirited scale, the mine exhibiting the most favourable prospects.

GRAND JUNCTION COMPANY—Have about 1100 acres surrounding the last-mentioned mine. This property was purchased at a time when great competition prevailed, and the sections were bought at a very high rate; one immediately adjoining the Kapunda, and in the same bearing and course of the lodes, was knocked down at 7*l.* 10*s.* In attempting to prove this section, a very extensive slide of mine strata has completely interrupted the Kapunda lodes, and runs almost longitudinally through the section. This is a property which requires the experience of individuals of a higher stamp than underground Cornishmen, and the directors we trust will, when the Deed of Settlement is executed, proceed vigorously to work one of the most valuable properties in the colony.

MOUNT BARKER MINES.—These mines are upon the portion 12,000 acres of the special survey of 20,000, selected for the South Australian Company by W. Giles, Esq., the company's manager. The lodes are numerous, and of very rich ore; varying in width from 9 to 12 in. to 7 ft., as in the Kangaroo shaft, which is estimated to turn out about 9 tons of ore. About 300 tons were sent home last year, which was but the first opening; and this year, from the great promise of the lodes, it is probable 1000 tons at least will be the result of the workings with the present strength.

LYNDOCH VALLEY MINE.—This mine belongs also to the South Australian Company; and is only now in the course of examination. A few tons of very beautiful ore have been raised; some of which has yielded, of pure copper, 50 per cent. The ores have hitherto been found in a broil of quart or spar, resembling a lode, but not quite established in consequence of its not being traced into the natural or surrounding strata, which is a mica slate. Operations to trace the lodes are in progress; and, it is probable, our next report will give the result.

ROYAL MINING COMPANY—Have purchased nine sections of land in the neighbourhood of the Kapunda. No attempts have been made to examine this property effectually. Very little more than the upset, 20*s.* per acre, was given for these sections; and, as the Kapunda has proved very rich in mineral, sooner or later these may be found to be valuable from the same cause.—*South Australian Gazette*, Feb. 13.

EMIGRATION—MINERS' WAGES IN AUSTRALIA.—At a time when there exists so much distress in the mining and agricultural districts of this county, information calculated to put the distressed in the way to better their condition in life, may not be uninteresting; and with that view, we publish the following extract from a letter just received from a native of this neighbourhood, dated Port Adelaide, Oct. 22, 1846:—"We left Plymouth on the 7th January, and arrived here on the 3d May, after a very pleasant passage. I am working at the Burra Burra Copper Mine, and *my wages are from three to four pounds* A WEEK! and I hope I shall have the pleasure of seeing you (his friend) at South Australia. * * I like the country very much. My brother William and William Chapel are working at the Mount Barker copper mines, and doing very well. Elizabeth and Mary are dress-makers, which is a good business in this country, and they get from 5*s.* to 6*s.* for making a dress. * * Miners get more wages in this colony in one week, than they do in Cornwall in two months. Clothing is just as cheap here as in England.—THOMAS DAVEL."—The following is an extract from another letter, from a gentleman residing in Adelaide, South Australia, dated Feb. 5, 1847:—"The introduction of money is the first step towards her advancement, then suitable labour; by which I mean labouring persons adapted to the wants of the colony—such as miners from Cornwall, and some agricultural labourers from Suffolk, Norfolk, and Essex. And to show the scarcity of farm servants, it need only be stated, that bullock drivers, employed in driving the bullocks and drays loaded with ores from the mines to Port Adelaide, are receiving 1*l.* per week wages, and also their victuals. As regards good working miners from Cornwall, they may be sent in any number; for such are the vast mineral riches of the colony, that no bounds can be set to the employment required in this department. And, although her agricultural and pastoral prospects are extremely good, they will never require such an influx of labour as is now in demand for working the numerous mines; as, owing to the paucity of labour, several of the copper mines are only partially worked, and some not worked at all. Indeed, her Majesty's Land and Emigration Commissioners can make no mistake in sending out as emigrants working miners from Cornwall to any extent, as the wants of the colony in this respect are of the most pressing description; for the working miner of South Australia is, at this time, actually getting paid for his labour five times the amount paid to the working miner of Cornwall. The journeymen trades that do well here, are wheelwrights, blacksmiths, carpenters, bricklayers, tanners, and maltsters. These descriptions of persons readily obtain 7*s.* to 10*s.* per day for their work, which is nearly double what they would get in England. But as to artists, clerks, agents, engravers, Spitalfields weavers, and cork-cutters, they will get little or no employment, and had much better stop at home."—*Penzance Journal.*

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—The 18 fm. level end west is improved since my last; it is now worth about 14*l.* per fm., and through the slide, the rise behind this end continues to look well—worth about 20*l.* per fm. The 12 fm. level end west is worth about 8*l.* per fm.; the stopes on the middle lode, under the same level east and west, are worth about 14*l.* per fm.; this lode, in the winze sinking under the 18 fm. level, still contains very little ore. We have communicated the adit end with surface shaft eastward, and shall now continue this end, and commence to drive west from Dorge's shaft, to meet it, which will enable us to hole to Nangle's the quicker. We are at work at the shaft in the river, but detained a little for want of a pile-driving engine.—T. GROVE; G. WHITE.

BEDFORD UNITED.—At Wheal Marquis, the lode in the sump-winze (now 7 fms. 5 ft. under the 80 fm. level) is 4 ft. wide, and worth 37*l.* per fm., or 74*l.* per fm. the full length of the winze; the lode in this level east is 3 ft. wide, and worth 19*l.* per fm.; the stopes, in the back of this level, is worth about 20*l.* per fm. In the 70 fm. level the lode is 2 ft. wide, composed of spar, mundic, and ore; the lode in the winze of this level is 2½ ft. wide, saving work. There has been no lode taken down in the 58 fm. level east. At Liscombe, the lode in the adit level east is 3 ft. wide, composed of spar, mundic, and good stones of ore; and in the rise, in this level, the lode is 2 ft. wide—spar, mundic, and ore. The south engine-shaft is 6 fms. below the plat—lode 3 ft. wide, producing good stones of ore. The lode in the adit level east is 2 ft. wide—spar, mundic, and ore, looking more kindly than for some time past. JAMES PHILLIPS: July 20.

CARADON WHEAL HOOPER.—The 50 cross-cut north is extended from shaft 6 fms., which is now in granite; this is dipping south 7 ft. in a fm.; in sinking the shaft 4 fms. deeper would put it to the granite, which, we may reasonably expect, will give a favourable change to the nature of the lodes. The levels in South Caradon coming towards us are looking well, as also Wheal Agar (this lode passes through the centre of Wheal Hooper), which greatly strengthens my sanguine opinion, with many others; many of the shareholders have for some time past been looking forward to this, as they should then, with confidence, expect to have a profitable mine, knowing that the lodes before alluded to are in granite, and to be very rich, which is but a few fathoms to the west of Wheal Hooper sett. Many gentlemen, in passing this way, have said to me, if this mine was but in granite, how much I should like to have shares with you here, seeing how beautifully it is situated; but I question if they can get shares, except at a considerable advance in the price: I have a few shares, and should not like to part with them, let the offer be what it may; this I state as a fact, and for the encouragement, as well as information, of distant shareholders, who have not an opportunity of visiting the mine. I should have much pleasure to see some of you call this way, when I should be able to say more to you, as well as show you the specimens from the lodes; I can assure you that your confidence will be much strengthened by your visit. The end east at the 50 is extended on caunter lode 7½ fms., which is a kindly lode—copper, mundic, can, peach, prian, &c.; we have suspended this for the time, to drive south to Daw's, Dingle's, and Carpenter's lodes, which will come in under the junction, as is expected; we have about 12 fms. to drive, which is expected to be accomplished in 10 weeks, or less; we have four men driving west on caunter lode, which will be in granite on driving 4 fms. I could say much more about the prospects; but, having said so much in time past, I forbear saying any more, than they are very cheering at present, or that there is not a better speculation in this neighbourhood.—J. SEYMOUR: July 19.

COATLITHE HILLS.—During this week, the level east from A shaft has been driven about 3 ft., and the vein in the end has improved—being now about 15 in. wide, principally composed of rider spar and stones of ore, producing about 4 cwts. of ore per fm.; the horse level has been driven about a fathom. —J. M. PAULL: July 17.

COOK'S KITCHEN.—At Chapple's lode, the engine-shaft, sinking under the 180 fm. level, is now down about 7 fms., where there is a large kindly lode, producing a small quantity of tin. In the 180 fm. level east the part of the lode on which we are driving is 4 ft. wide, and worth 10*l.* per fathom; in the 180 fm. level west we are at present driving north through the lode, which produces pretty good work. In the 170 fm. level east the part of the lode on which we are driving is 4 ft. wide, and worth 10*l.* per fm.; in the 170 fm. level west the part of the lode on which we are driving is 4 ft. wide, and worth 5*l.* per fm. In the 160 fm. level west the part of the lode on which we are driving is 5 ft. wide, and worth about 24*l.* per fm. We have suspended the sinking of the new east shaft for the present, as the 170 fm. level would not be got forth in such time as the shaft would be down, and have set the bottom of the 160 fm. level, to stope on tribute. In the 92 fm. level west, on Eudy's lode, the lode is 3 ft. wide, and producing a little tin. On North Tincroft lode we have suspended the driving of the 80 fm. level north, and have set the 70 fm. level to drive west on the Druid's lode. We have cleared the adit through Tincroft sett to within about 9 fms. of our boundary. We sent to smelting-house on the 10th, 30 tons 5 cwts. of tin, which brought 1426*l.* 6*s.* 9*d.* The mine, on the whole, is looking more promising than it has done, and we are breaking better stuff in the tribute pitches.—J. VIVIAN: July 19.

CUBERT SILVER-LEAD.—The ground appears much as usual in the engine-shaft. In the 35 fm. level the lode going east is large, from 2 ft. to 3 ft. wide, and exceedingly wet, with a little lead, but just now not rich; in the same level, going west, the lode is 2 ft. wide, a hard spar, mundic, and some lead—improving. In the 25 fathom level, driving east, the lode is 2½ ft. wide, worth a ton of lead ore per fm.—a very kindly level; we expect shortly to cut the great lode in the cross-cut, driving south in this level. The ground in the new surface shaft is rather spare for sinking. Respecting the tribute department, some of the pitches continue to look well.—R. ROWE.

DARTMOOR CONSOLS.—We are commencing about the wheel-pit, and have repaired up our blacksmith's shop, and the blacksmith is at work. We have completed the walls of our timber-house, and have collared up and secured all the necessary shafts, have cleared all our leats, the adit is nearly completed, and we are getting stones for the new wheel-pit as fast as possible; every thing is going on with life. We have also men clearing the deep adit, and have commenced sinking Henry's engine-shaft, to take the rich courses of tin referred to in a former report.—T. GREGORY; J. SPARGO.

DEAN PRIOR AND BUCKFASTLEIGH.—In the deep adit we are driving on the south part of the lode, which has a very promising appearance, although at present poor—price for driving, 3*l.* 15*s.* per fm. In the 10 fm. level, under adit, the lode is about 12 in. wide, composed of spar and prian, no alteration in price since my last; in the bottom end, driving west, the lode is improving, and, in driving off the slide course, is getting more settled and regular throughout; the end is about 2½ ft. wide, composed chiefly of capel—price for driving, 4*l.* 10*s.* per fm.; the lode in the pitch, in the back of the 10, still holds out a very promising feature; in the pitch in the bottom of the 10 fm. level, under adit, the men have made but little progress in the past week, as to exploring on the lode, owing to the crushed ground from the south side, and from the bottom of the level, which the men have had to secure, &c. In the pitch, in the back of the bottom level, the lode is poor at present, although producing some very fine stones of horse-flesh ore, which is a good indication. We are making the necessary preparations for the grinder, tramroad, &c., and also for the water-wheel of larger dimensions; the castings being ordered, we shall make all the progress we can to carry the work into effect.—H. CHOAKE.

DEVON AND COURTENAY CONSOLS.—The lode in the 30 fm. level, driving east, is 3 ft. wide, composed almost entirely of peach and mundic, with a few spots of ore; but, although at present poor, is (considering the depth, it being not more than 30 fms. from the surface) a very promising lode; in the same level, driving west, I think the men have got through the slide, the ground appearing to be more settled, and the lode forming again in the south side of the end; I have no doubt but the lode will improve in this end, as soon as we get clear of the disordered ground. In the deep adit level, on the south lode, the lode is at present composed of killas and spar, with some small strings of ore interspersed among it. The lode in the shallow adit level, on the north lode, is 3 ft. wide, composed of flookan, can, mundic, and white iron, with some spots of lead and copper ore, but not worth saving. The shaftmen have nearly completed their bargain in the shaft, and will resume sinking again on Thursday or Friday. Our engine works well, and the pitwork is in good order.—N. SECCOMBE: July 20.

DYFUGWN LEAD MINES.—I beg to hand you the cost for June, together with my report on the mine. In the stope west, in the 22 fm. level, we have cut 3 fms. 2 ft. 1 in. of ground, worth 18*l.* per fm. for lead; this stope has much improved in the past month, and is likely to continue to improve; the lode is 5 ft. wide, with a good mixture of lead from one side to the other; in the stope east we have out 4 fms. 0 ft. 2 in. of ground; the lode is 6 ft. wide, and worth 10*l.* per fm. for lead. In the east end, in the 22 fathom level, we have driven 1 fm. 3 ft. 10 in. through good orey ground, worth 8*l.* per fm. for lead; this end has improved in the past month; and, from the past indications, I have no doubt but we shall have a good course of lead ore in the present month. We have 5 tons of lead washed, with several more partly dressed.—J. REYNOLDS.

EAST CROWNDALE.—Our engine-shaft still continues favourable for sinking, though, since this very hot season has settled in, the air has been dead, and, of course, has rather impeded our sinking; we have sunk in the past week about 5 ft. In the Rix Hill adit the ground continues just as when last reported on. Our engine and pitwork in good order.—STEPHEN PAULL: July 17.

EAST TAMAR CONSOLS.—The lode in the 54 fm. level, north of Harrison's shaft, is 2 ft. wide, fluor-spar and silver-lead ore; the lode in the 54 fm. level south is 20 in. wide, good saving work. The lode in the 46 fm. level north is 18 in. wide, fluor-spar and ore; the lode in the 46 fathom level south is 20 in. wide—a very kindly lode. The lode in the 38 fm. level south is 18 in. wide, work of a good quality. At Charlotte's, the lode in the 11 fm. level north is 20 in. wide—a very promising lode; but, as the air is very foul, we have put

the men to rise in the back of the level, to hole to the deep adit, to ventilate the same, which will make it more convenient in driving the level, and working the pitches. The appearance of the mine at present is very promising.—B. Robins: July 20.

GREAT MICHELL CONSOLS.—In the 35 fm. level, east of the engine-shaft, the lode is producing stones of ore, intermixed with flaor, mundic, and spar; in this level west, no lode has been taken down during the past week. In the western winze, sinking below the 22—now down 10 fms. 1 ft. 6 in.—the lode is producing good stones of grey and yallow copper ore—very promising. —T. Richards: July 20.

GREAT WHEAL MARTHA.—We have intersected the lode in the 40 fm level, which is about 1 ft. big, composed of a brownish capel and yellow mundic, with spots of copper ore. There is a great deal of water issuing from the end, which shows it to be a hollow lode, and which I consider a favourable indication. We have now driven about 6 ft. west, and find the lode has a better appearance than when we first cut through it; as soon as we have sufficient room, and the water abated, we shall put 6 men to drive east. I will send you samples of the lode on Monday. The water in Thomas's shaft is now drained 6 fms. below the 10 fm. level; and, as we have a long level in the 20, I expect we shall not be dry before Wednesday next, and then I intend drawing to surface the 20 fms. of 9 in. pumps, that are now in Thomas's shaft. At Sherrall's we have opened further (on the lode mentioned in my last), and find it to continue its size (3½ ft. big), composed of a hard blue capel and mundic, producing a small quantity of tin; but it is not as yet in a settled state.—T. Penaluna: July 17.

GUNNIS LAKE.—At Chilsworthy, Bailey's engine-shaft is 10 fms. 2 ft. 6 in. under the 12 fm. level; the lode therein is 2 ft. wide, composed of spar, mundic, and ore—altogether a very promising lode; in the same level west, driving north, we have not yet cut the lode.—W. Richards: July 20.

HAWKMOOR.—The lode in the 15 fm. level, east of Hitchins's shaft, is 2½ ft. wide, composed of spar, capel, mundic, and spots of ore.—P. Richards.

HEIGNSTON DOWN CONSOLS.—The lode in the 20, east of north shaft, is 3 ft. wide, composed of gossan, spar, peach, and tin—a very strong kindly lode; in this level west, there has been no lode taken down. We are clearing and securing Buddle's adit. In consequence of the founders not having sent on the castings in time, we were prevented starting our engine yesterday; we now, however, hope to set the engine-stamps, and all the machinery attached, in motion by the beginning of another week.—W. Richards: July 20.

HOLMBUSH.—The diagonal shaft is sunk 7 fms. 3 ft. below the 120 fm. level—the ground is still favourable, and the branches producing stones of ore, spar, and mundic; the lode in the 120 fm. level, west of the great cross-course, is 15 in. wide, producing stones of ore, and at present has a more promising appearance than for some time past—the present end is about 13 fms. east of the slide, at which point we fully expect to meet with another shoot of ore, judging from the nature of the lode above this level; the lode in the 120 fm. level, east of Hitchen's shaft, on the north part, is 10 in. wide, composed of mundic and spots of ore. The lode in the rise above the back of the 110 fm. level south is 2 ft. wide, composed of soft spar, prian, and stones of lead. The lode in the 100 fm. level south is 2½ ft. wide, composed of spar and stones of lead, worth 6l. per fm.; the strata in this level has been hard for some time past until within a few days—it is now a beautiful white killas; the pitches, in the back of this level, are still producing some very good lead. Our parcel of lead weighed 10 tons (payable), and was shipped last Thursday on board the *Erin* (Ellford, master), at Plymouth.—W. Lean.

KIRKCUDBRIGHTSHIRE.—At bottom of Stewart's shaft, sinking under the 40 fm. level, we have not been able to do much since I wrote you last, for want of top power; we require 5½ revolutions of the water-wheel per minute for pumping our water, and are only able to work 5; we have commenced wheeling the stuff from the ends, to make all the room we can, to keep the ends and stopes going during the dry weather. The lode in the end west, in the 40 fm. level, is improving in character, producing full 1 ton of lead per fm.; the same will apply to the 30 end west, although the sole is far better than the back of this end. I cannot speak of much improvement in the backs of this level since my last; the winze sinking under it east is producing about half a ton per fm. The lode in the 20 west is very promising, producing about half a ton per fm.; and the backs in this level, which are set at 30s. per fm., are doing well—rather better than reported this day week. On the whole, our prospects in the three ends driving west are very good—better, I should say, than we have seen before; but we feel greatly put about for the present for top water; and I only regret we have not the crusher in actual operation, so that we might fall to with vigour at returning the ore, when we get an increase of top power. A little delay in getting up the stuff would be of little importance, if we had the crusher at work, as we could then dress a much larger quantity in a shorter time. In the meantime we have to dispense with the greater part of our dressers.—J. Buzzo: July 17.

MENDIP HILLS.—During the past week but little has been done in removing the top rubbish from off the slag, as the principal part of our force has been employed in laying open a cutting to receive the launders between Long Wood and Velvet Valley—there being in this part a point of hill about 5½ ft. higher than the water level. We have also several men engaged making a carriage road down the valley, in order to take the materials, &c., to the proposed site for smelting, &c. The lode in the 38 fm. level, south of the shaft, is without any important alterations—composed of white spar and flookan, intermixed with particles of lead; the lode in the winze, sinking below this level, is about 2 ft. wide, composed of quartz, limestone, and a little flookan; ground rather harder for sinking than it has been.—F. C. Hampur: July 19.

SOUTH TAMAR UNITED.—The men in the engine-shaft are getting on as expeditiously as possible in cutting the ground, and putting in bearers and cisterns to fix the plunger lift, which work will be done, and the lift fixed, by the early part of next week. The men in the adit are getting on very satisfactorily in clearing and securing the same.—B. Robins: July 20.

SOUTH WHEAL TRELAWNEY.—The adit level is communicated to the engine-shaft, and made all complete; at present we are cutting a droke around the shaft in this level, to take up all the top water; also cutting cistern-plat, to fix house, lift, &c.; this work will occupy one week only. After this is accomplished, we shall resume sinking the engine-shaft with renewed vigour; setting a lift of 10 fms. at a time; it is 5 fms. 4 ft. below the adit level, the ground in which is still favourable. Sobey's lode, in the adit level south, is 2 ft. wide, composed of beautiful gossan, barytes, mundic, prian, and spots of copper and lead ores—a very promising lode indeed, and one that is likely to be found productive in depth. The fire has been lighted, to prove the draft of the engine, which is excellent. I should observe, the adit level is suspended, since the communication is made to the engine-shaft.—W. Lean: July 17.

TAMAR SILVER-LEAD.—In the 160 end, south of the shaft, the lode is 3 ft. wide, of a coarse quality; in the north end, in this level, there has been no lode broken since last report. In the 145 end, south of the shaft, the lode is small and unproductive; in the winze, sinking below this level, the lode is 2 ft. wide, producing good stones of ore; in the 145 end north the lode is 1 ft. wide, good saving work. In the 135 end south the lode is 18 in. wide, composed of capel, with a small quantity of ore; in the winze, in the bottom of this level, the lode is 2 ft. wide, good stamp work. In the 125 end the lode is 2½ ft. wide, yielding work of a promising character. At North Tamar, in the 70 fm. level, the lode is 20 in. wide, composed of capel and ore, saving work. In the 60 fm. level the lode is 18 in. wide, orey throughout, and of a promising appearance.—J. Sprague: July 19.

TINCROFT.—I can speak of no particular alteration in the north mine since my last report, except in the 80 end east, which is improved for tin; and I expect it will further improve, as we get under the tin ground passed through in the level above. At Palmer's, no alteration, except in the 70 west, which is improved for copper ore. Chapple's lode, in the south mine, continues to look well. The 100 end east has very much improved, now worth 10l. per fm.; the lode in the 100 west is 15 in. wide, producing some ore, and kindly. The same may be said of the 90 west. The winze, sinking in the bottom of the 100 (on tribute), is worth 15l. per fm.; the pitches in the back of the 100, and back of the 90, continue to produce fair quality ore. We shall sample upwards of 500 tons of copper ore on Wednesday next, nearly 100 tons of which are from Chapple's lode. We are now encouraged to commence driving the 90 east on the same lode. At Wheal Providence, we have cleared the adit so far as Clinton's shaft, and have cleared that shaft to the adit level; how far the adit has been extended beyond the said shaft, we cannot as yet ascertain. We are making preparations for fixing a horse-whim in the shaft last named; we are getting on as expeditiously as possible in our operations in this part of the mine, as we consider our prospects good on the Druid lode.—W. Paul: July 19.

TRELEIGH CONSOLS.—In the 110 fm. level, east of Christoe's, the lode is 2½ ft. wide, but not much ore. In the winze, below the 100 east, the lode is 2 ft. wide, not so good as last week, now worth about 6l. per fm.; the 100 cross-cut, north from Garden's, we have driven 3½ ft. in capels, which is very hard ground. In the rise, above the 90 west, the lode is 2 ft. wide, worth 8l. per fm.—this rise is against the winze, sinking below the 80 fm. level. In the 80, east of ditto, the lode is 20 in. wide, but very little ore; in the winze, below the 80 west, the lode is 3 ft. wide, the south part very good, worth 12l. per fm. In the 70, west of ditto, the lode is 10 in. wide, no mineral. In the 60, west of ditto, the lode is 4 ft. wide—it consists of spar and mundic, rather promising for ore. In the 70, west of Symons's, the lode is 4½ ft. wide, with stones of ore in the south part of the lode, not to value. In the 60, west of ditto, the lode is 20 in. wide, with stones of ore, nothing to save; in the adit level east, on Wheal Forest lode, the lode is split into two branches, in all 18 in. wide, but not much ore.—W. Symons: July 17.

UNITED HILLS.—In the 90 fm. level, eastern end, the lode is 2 ft. wide, worth 6l. per fm.; in the western end the lode is 4 ft. wide, worth 15l. per fm.; the lode in the stopes is 2½ ft. wide, worth 35l. per fm. In the 80 fm. level, eastern end, the lode is 3 ft. wide, worth 14l. per fm.; in the west of cross-cut the lode is 2 ft. wide, worth 12l. per fm. In the 70 fm. level, eastern end, the lode is 2½ ft. wide, worth 8l. per fm. In the eastern shaft the lode is 3½ ft. wide, worth 12l. per fm. The 60 fm. level is suspended since August last; the shallow adit was suspended last month. At Wheal Charles, in the 50 fm. level, the lode is 2 ft. wide, poor. At Wheal Sparrow, in the 40 fm. level, the lode is 18 in. wide, worth 6l. per fm. In the 30 fm. level the lode is 2½ ft. wide, worth 4l. per fm. In the 20 fm. level, western end, the lode is 1 ft. wide, unproductive; in the cross-cut the ground is favourable for driving; in the adit level the lode is 15 in. wide, producing some stones of ore. Since Saturday morning last, Williams's engine has stopped six hours; the water is again in fork to the 90 fm. level, and the men are engaged working in their respective places; at present, she is working about nine strokes per minute, which, without any stoppage, will keep the water to the 90. Since the new boiler has been put in, we are saving about half a ton of coals per day.—T. Trevenen; R. Williams: July 20.

WEST WHEAL JEWEL.—In the 30 fm. level west, on Tolcarne tin lode, the lode is 15 in. wide, worth 6l. per fm. In the 12 fm. level, west of Quarry shaft, on the same lode, the lode is 1 ft. wide, worth 5l. per fm.; in the stopes, east of Quarry shaft, in the bottom of this level, the lode is 3 ft. wide, worth 20l. per fm.; in the stopes, in the back of this level, the lode is 2½ ft. wide, worth 16l. per fm.; in the stopes, in the bottom of the adit, east of Pryor's winze, on the same lode, the lode is 2½ ft. wide, worth 18l. per fm.; in the adit end, west of Quarry shaft, on the same lode, the lode is 15 in. wide, worth 9l. per fm.; in the 12 fm. level, east of Rowe's winze, on the same lode, the lode is 9 inches wide, worth 5l. per fm. As we have to employ the sumpmen to look after the engine-shaft, the committee think it proper to put these men to drive the 100 fm. level west on Wheal Jewel lode; this lode is improved in the past week.—R. Johns; T. Brax: July 19.

WEST WHEAL MARIA.—The lode in the eastern engine-shaft is 3½ ft. wide, producing good stones of ore; the lode in the western engine-shaft is about 3 ft. wide, composed principally of capel, spar, and mundic, and a little ore. In the 54 fm. level, east of this shaft, the lode is about 2 ft. wide, with spots of ore in places; in the cross-cut south, in this level, there is no important alteration.—T. Rodda: July 20.

WHEAL ADAMS.—The sumpmen have been engaged during the past week in driving south in the 50 fm. level, on a branch containing blende and lead; on which course we considered that a level would communicate with the circuitous one formerly driven, and thus obviate the necessity of clearing and securing the latter, which would be much more expensive—the object is accomplished, and we are progressing favourably; the lode in the 50 fm. level, driving south, is 6 ft. wide, is hard, and at present contains but little lead. Tonking's stopes continue much the same as last reported. The 28 fm. level, driving south on the western lode, is improved, and now worth 9l. per fm.; the cross-cut, in the north part of the mine, is in compact blue slate; but it looks rather of a more favourable character than it did last week. The new pitch, in the back of the 18 fm. level, is producing a fair quantity of orey stuff. The winze in the 40, on the middle branch, is stopped, owing to the water being too powerful for manual labour. As soon as the 50 is cleared, we shall rise against it. Our last parcel of lead ores, computed 37 tons, is sold to Messrs. Mullins Brothers, at 12l. per ton; and we have about 15 tons dressed towards another parcel.—J. Prince: July 20.

WHEAL BARBARA.—The engine-shaft is down 6 fms. below adit, ground hard, but better for boring and blasting; no appearance of the lode yet, neither do I expect to see it until we have first a greater change in the ground; the men are working well, and the horse-engine doing good duty.—H. F. Stephens.

FOREIGN MINES.

ST. JOHN DEL REY MINES.—*Morro Velho, May* 8.—Produce for April—

Morro Velho	13·093 oits	=	125·782 lbs.
Cata Branca	·125 „	=	1·202 „
Total	13·218 oits	=	126·984 lbs. Troy.

The Morro Velho gold is from 3005 tons—4.35 oits per ton; 91 tons of previously rejected ores were brought in. I feel, therefore, quite certain, that after the removal of the 15 heads of the Lyon, your produce ought to be above 15,000 oitavas per month, and frequently to pass 16,000 oitavas.

Mine Report.—The number of borers for April has averaged 186, which is quite force enough to break a full supply of ore. The Great Cachoeira stopes being brought again into working this month (May), the supply ought to have been large; but, unfortunately, an influenza having struck the establishment, and principally the underground force, the number of borers has decreased to 140 and 135; there is no remedy for this but patience. Next month, I doubt not, this influenza will have left the establishment, and then the supply ought to be ample enough to enable picking to be carried to a considerable extent. The excavation of the wheel-pit is progressing well.

Mechanics' Report.—The new 15 heads of the Lyon stamps will be fixed in all this month; and, consequently, there will be a falling off in the produce of May, but it will very quickly be made up, with interest.

Store Report.—There has been more timber bought in April than I had regulated; this was by mistake, but in May it will be checked again.

Cost for April—Rs. 29,777 762=£3567 2s. 7d.—You will observe, that the sudden jump in the costs for April is almost wholly due to the charges from Rio, Rs. 1930 499; and to the charges from England, Rs. 4637 287—together, Rs. 6567 786. As to the duty performed, Capt. Treloar's yearly report explains that; and he has said more than once, that unless great activity were exercised in timbering and securing the mine, and erecting machinery for it, it would soon come to a close. If you consider 27 contos moderate, you will be able well, I should say, to keep the costs within that limit. The having got rid of the horse-whims, the expense of which increased last year 20 per cent., is now cut off altogether; you have fewer people to keep, since 47 died last year; consequently, on the whole, the expense ought to be less.

GWINEAR CONSOLS.—A meeting of adventurers was held at the offices, London—I. Haywood, Esq., in the chair.—The accounts for March, April, and May, showing balance in hand, 110l. 15s. 5d., were examined and allowed. The secretary (Mr. R. Tredinnick) was instructed to authorise Messrs. Michell, Tredinnick, sen. and jun., and Mr. Stephens, to purchase a small engine, adapted for conversion to a whim, whenever the requirements of the mine justify the erection of a larger and more powerful engine—such engine not to exceed a 30-in. cylinder, or cost above 400l. Mr. Rosewarne was appointed clerk of the mine, at a salary of 1l. 1s. per month, who is to forward a copy of the cost sheets monthly to the secretary. The secretary's bill for incidentals, amounting to 16l. 8s. 9d., was directed to be charged in June cost. It was announced, that 100 tons of copper ore was already broken, and dressed at the surface. The following report from Capt. H. Stephens was read to the meeting:—"Haywood's lode, in driving west, is not so good as it has been; the ore is dipping west, and it is now not more than 3 ft. high in the end—it is a fine lode, underlaying about 1 ft. in a fathom; driving east it is 3 ft. wide, yielding 5 tons of ore per fm., with very little underlay. These ends are driving at water-level on the new discovery; and I think, on the whole, its appearance is as good as ever. We shall be obliged to suspend working here, to clear up a shaft for ventilation, and discharge of the stuff. The eastern end, on north lode, is still poor, and we are driving south from Tredinnick's lode, to cut the lode which produced the fine gossan at shallow adit, but have not accomplished it."

HERODSCOMBE MINE.—At a meeting of adventurers, held at the mine, on Monday last, the accounts were produced and passed, showing balance against the adventurers of 110l. 7s. 11d.—A call of 2l. per share was made.—The following report, from Capt. H. Medlen, was read to the meeting:—"The adit level is driven 64 fms. on the course of the lode, where it has been found to vary in size from 1 to 3 ft. wide, producing lead nearly the whole of this length, and, in some places, good bunches of lead; at present, the lode in the north end is 2 ft. wide, and rather poor; in the south end the lode is 2½ ft. wide, producing good stones of lead. We are sinking an engine-shaft, which is now 12 fms. deep—we intend to sink this shaft 16 fms., then drive and cut the lode, which we hope to accomplish about the end of September; we are stoping the back of the adit level, from which we expect to have 30 tons of lead ready for sale in about six weeks. The engine-house and fly-wheel stand are nearly completed; we expect to get the engine and crusher to work in four weeks."

NORTH ROSKEAR.—To cost for April and May, 5688l. 5s.—By ores sold, 6385l. 13s. 10d.: showing profit of 697l. 13s. 5d.; in purser's hand end of March, 2005l. 17s. 6d.; deduct dividend, 700l.: leaving in hand, 2003l. 10s. 11d.

TREVISKEY AND BARRIER.—Statement of accounts for April and May.—Treviskey: By amount of ore sold, 25th March, 1847 (less 1-12th for lord's dues), 2536l. 2s. 11d.; received for materials, charged Barrier, May 27, 144l. 11s. 1d. = 2550l. 14s.—*Deduct*: To labour cost, April and May, 1847, 634l. 4s. 3d.; tribute of ore, 134l. 19s. 9d.; merchants' bills, &c., 208l. 0s. 1d.; Treskvean adventurers' engine cost, &c., 90l. 5s. 10d.=1067l. 9s. 11d.: showing a profit of 1483l. 4s. 1d.; add balance in hand, end March, 1847, 47l. 18s. 6d.=1531l. 2s. 7d. —deduct dividend of 12l. per share, declared 19th July, 1847, 1440l.; leaves now in hand, and to be carried to the account of the end of July, 1847, 91l. 2s. 7d. —The following is the report:—In Michael's shaft, sinking 6 fms. below the 236 fm. level, the lode is 3 ft. big, producing 4 tons of ore per fm. In the 248 fm. level, driving 6 fms. east of the shaft, the lode is 1 ft. big, producing 1 ton of ore per fm. In the 236 fm. level, 14 fms. east of the shaft, the lode is 20 in. big, producing 2 tons of ore per fm.; in the winze, sinking behind this end, the lode is 3 ft. big, producing 7 tons of ore per fm. In the 200 fm. level, driving 36 fms. east of the shaft, the lode is 18 in. big, but unproductive. In the 188 fathom level, driving 14 fathoms east of the shaft, the lode is 2 feet big, producing 2 tons of ore per fathom. In the 176 fathom level, driving 30 fathoms east of the shaft, the lode is 20 in. big, producing stones of ore, and has a promising appearance. In the 30 fm. level, on the north lode, driving east, the lode is 3 ft. big, composed of spar, with stones of ore in it—this level is now driven 50 fms. into the sett. We sampled last week 851 tons of ore, and expect to rise 350 tons for July and August.—Barrier: By amount of ore, sold 25th March, 1847 (less 1-14th for lord's dues), 334l. 10s. 6d.; adventurers' proportion of dividend, declared 17th May, 1l. 10s. 9d.=336l. 1s. 3d.—*Deduct*: To labour cost for April and May, 49l. 16s. 9d.; tribute of ore, 92l. 0s. 2d.; merchant's bills, &c., 19l. 7s. 1d.; Treskvean adventurers' engine cost, 21l. 7s. 10d. —183l. 1s. 5d.: showing a profit of 152l. 19s. 10d.; add balance in hand, end March, 23l. 13s.=176l. 12s. 10d; deduct dividend of 1l. 5s. per share, declared 19th July, 150l.; leaves now in hand, and to be carried to the account of the end of July, 26l. 12s. 10d.—We sampled last week 94 tons of ore, and expect to rise from the pitches 90 tons for July and August.

WHEAL GRACE.—A meeting of adventurers was held at the mine, on Monday, the 12th inst.—C. V. Bridgman, Esq., in the chair.—The costs for April and May were examined and allowed, and the liabilities of the company having been ascertained, the following appeared to be the financial result:—Balance at last general meeting, 167l. 12s. 11d.; April and May costs, including part of the engine, 851l. 2s. 7d.; balance of engine and other bills and costs to end of June, 677l. 6s. 6d.; Mr. Raskilley, for damages to Lady-day, 1847, about 15l.; Mr. Rundle, the lord, for permanent damage to the ore, about 75l.; other bills not delivered, estimated at 50l.=1836l. 2s.—By call of 30s. per share, 1536l.; leaving balance against the company, 300l. 2s.—The engine is working very well. The shaft has been sunk 13 fms. below the adit level, and is to be sunk 5 fms. deeper, when a cross-cut will be driven about 16 fms. to intersect the lode at 18 fms. below the adit, and 9 fms. below the course of lead gone down in the level above. These works are expected to be accomplished by the end of Oct.; and the costs thereof, and the discharge of the above balance of 300l., can be fully met by a call of 10s. per share; it was, therefore, resolved, that a call of 10s. per share be made, and required to be paid to the purser, or to Messrs. Gill and Co., bankers, on or before the 20th August next. Although it appears that there are only 105l. arrears of calls, but that some of the defaulters have not paid any call, it was resolved, that such defaulters be informed, that unless such arrears be paid within 14 days, Mr. Bridgman, the solicitor of the company, has been instructed to get the merchants, to whom bills are due for materials, to sue such defaulters.—It was resolved, that a superintending captain be appointed, at a salary of 2 guineas a month; and that such situation be offered to Capt. Alexander Barrett.

WHEAL ROSE CONSOLS.—At a meeting of adventurers, held at the mine, on Thursday, the 15th inst., the accounts—showing balance against the adventurers of 873l. 12s. 11d.—having been examined, were allowed, and a call of 1l. 10s. per share made to discharge it.—It was resolved, that Capts. Middleton and Evans be requested to inspect the mine as early as possible; and, should their report be confirmatory of Capt. Webb's, that the engine be stopped, and the materials drawn to grass, and disposed of forthwith.—The following report from Capt. J. Webb was read to the meeting:—"We have driven in the 20 fm. level, in the middle lode, about 80 fms., but find that none of the ground will pay for working. We have also extended the levels north and south in the west lode about 65 fms., and have had a little lead ground, about 3 fms. long, which has produced about 20l. worth of lead; we have sunk 15 ft. below the 20 in this lead, but find it has rather declined. The 30 fm. level is driven in the west lode about 24 fms., and proved that the little lead does not continue from the 20. I am satisfied we have no mine of any worth at the present depth, and cannot recommend sinking to a deeper level."

WHEAL TRELAWNEY.—A general meeting of shareholders was held at the Fountain Inn, Liskeard, on Tuesday last.—C. Chippendale, Esq., in the chair. —The accounts for March and April, showing balance against the mine of 346l. 15s. 3d., were examined and allowed; the sales of lead in the two months produced 2147l. 10s. 6d.—Capt. John Bryant was appointed the manager and purser, at a salary of 10l. per month; and he is to apply his entire services to the business of the mine, and to take the situation as soon as it can conveniently be arranged.—A committee, consisting of Messrs. James Clymo, Peter Clymo, jun., and Sampson Vivian, on behalf of Wheal Trelawney adventurers (who are to choose a disinterested person as umpire), were appointed to decide upon granting a supply of water to Wheal Trehane from Wheal Trelawney, for dressing their ores, the prosecution of the levels of each mine, and all other matters.—The following report, from Capts. H. Vivian and J. Kemp, was read to the meeting:—We expect to finish cutting the plat in the 52 fm. level, Phillips's shaft, by the end of this week; and we hope to intersect the lode in this level at about a month from its completion. The lode in the 42 fm. level, north of Phillips's shaft, is 3 ft. wide, and worth 18l. per fm.; the lode in the same level south is 1½ ft. wide, and worth 14l. per fm. The lode in the 32 fm. level, north of Phillips's shaft, is 15 in. wide, and worth 6l. per fm.—we daily expect the lode to be larger here, from our having a great deal of water in the end; the winze, under the 32 fm. level north, is holed to the 42 fm. level, since last report. All the stopes are looking well, and we expect to sample 80 tons of ore on Friday next. Trelawney's shaft is sunk under the 22 fm. level about 13½ fms. In the 20 fm. level, Vivian's shaft, we are still driving the cross-cut west; and have also extended 2 fms. east.——*July* 21.—Since the meeting of yesterday, we have cut the lode at Vivian's shaft, north of Wheal Trehane, which is 3 ft. wide, composed of gossan and cann, with fine stones of lead—altogether of a very promising description.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

SIR,—I now send the result of my observations in the Tavistock locality, during my brief stay there. In each mine I have been underground, and can speak what I have seen:—

WHEAL FRANCO is going on just the same. They met with some capels in the 47 fm. level cross-cut last week, which they have gone through, and it turns out to be nothing but a bunch. If this had been the lode, the underlay would have been something greater than it is above the 32 fm. level; and, as it is invariably found, where the underlay is less, there the lode is best, they hope not to cut it for some fathoms further yet. The other parts of the mine are looking much as usual. The engine-shaft will be down to the 62 fm. level in a little more than two months from this time, if the ground continues as it now is.

BIRCH TOR.—Here they are looking better. The 74 fm. levels, both east and west, are producing tolerably good work; and in the shallow level, going east, there is a good lode. They are clearing the old Vitifer adit rapidly on the course of the lode, and find the old men have taken away every bit of the lode above the adit; they find occasionally good stones of tin in their attle. I believe this will yet be a good concern.

WHEAL ASH.—Here they are still driving the adit through a lode about 4 ft. wide, composed of solid mundic.

PLYMOUTH WHEAL YEOLAND.—Here there is but little doing on the great tin lode, except tracing it on the surface westward; they have found it about 170 west from where it was first cut, and it is seen 5 ft. wide, with only one wall discovered; and, although the pit is only 7 ft. deep, it is producing excellent stones of tin. Judging of this lode from what is seen near the surface, one cannot but suppose it is an exceedingly rich one. There is a copper lode being driven upon, in the south adit, at a depth of 8 fms., which is producing fine stones of copper, mixed with a beautiful spar. In the north adit, they have two copper lodes, about 4½ fms. from each other; one underlies north, and the other south; they will, therefore, form a junction at about 5 or 6 fms. deep. They are sinking a winze, to get at this junction; and, seeing there are good stones of ore in each now they are separate, have strong hopes of meeting with a good lode when they come together. They are driving east on the north tin lode; this lode has a kindly appearance, with occasional stones of tin, but not rich.

DEVON AND COURTENAY.—The lode in the 30 fm. level (new shaft) is from 4 to 5 ft. wide, and is composed of peach, quartz, mundic, and prian, with black and yellow ore and malleable copper intermixed, and is a very promising lode.

GEORGE AND CHARLOTTE is working by a small number of men; it is generally considered a promising sett.

CARN CAMBORNE.—The indications here are very encouraging. We have just cut a lode, of a promising character; and, from the quantity of water issuing from the cross-cut, another lode is expected to be not far off.

COMBLAWN.—The shaftmen are getting on well in sinking. In the deep adit level, on the north lode, they are rising some good lead ore and blende—the lode is 10 ft. wide. They have commenced dressing the ores, the floors being nearly completed.

CONDURROW has been done at 30l. in the county during the week, and I anticipate a further rise, as the next sampling will be the largest they have ever had, and the quality better. In addition to this, the returns of tin will be augmented.

DYFNGWM LEAD MINES.—These mines are situate in Montgomeryshire, and have been resumed recently by a company, who are likely to work them extensively, and, from present appearances, profitably. From the adit levels, they are now returning from 15 to 20 tons per month, estimated at 11l. per ton, and every prospect of an increase in returns as they progress. The reports of well-known and efficient mining agents, who have inspected the mines, fully concur in the opinion, that as the lodes become more developed, the more gratifying and satisfactory will be the result; and there is little doubt of these mines becoming as lucrative and permanent as any in the principality. The report for the present week (which will be seen in another column) fully justifies the opinions entertained.

EXMOOR ELIZA, on the Forest of Exmoor, is reported to be looking very well, and that they are on the eve of some important discoveries.

GWINEAR CONSOLS.—I am surprised at the quotation of Gwinear Consols, and am at a loss to account for such a low figure. In the course of a week or 10 days, the mine will speak for herself, as the sampling will fall very little short of 100 tons.

HERODSCOMBE.—A meeting was held this afternoon, when a call of 2l. per share was made. An official report of the same will be sent you as soon as printed.

HERODSFOOT.—I have just time to inform you, that they have cut the lode at the 82 fm. level good, but have not yet got the western wall. They have driven a hole, about 2 ft. square, into it about 20 in., and are quite satisfied,

although their expectations were great, for what is seen comes quite up to them. The 72 south end is worth from 16*l.* to 20*l.* per fm., and the 62 north end worth from 9*l.* to 10*l.* per fm.: these are the two most advanced ends.

— They have cut into the lode in the 82 fm. level about 2½ ft., and consider they have the opposite wall; it is a good orey lode, very much superior to the ground above. The ends are just as I stated before. They sold on Saturday last, 45 tons of lead, at 13*l.* 7s. 6d. per ton, and 30 ditto at 4*l.* ditto.

MARKE VALLEY.—We are happy to hear, that a further improvement has taken place at this mine. The Sarum lode in the 65 fm. level, in the eastern end, is now 8 ft. wide, and will produce at least 12 tons of copper ore per fm.; the quality of the ore also is much better—and there is no doubt, but that in driving a few fathoms further eastward, the ore will be as good as that raised from the same lode in the 50, which made a produce of 9½. The tribute pitches are also looking much better than usual: so that there is a fair prospect of this mine being very shortly placed on the dividend list.

PLYMOUTH WHEAL YEOLAND is looking exceedingly well, both on the copper and tin lodes. A shaft has been sunk on the former to a depth of about 4 fms., at a cost of about 10*l.*, and about 250*l.* worth of tin has been taken up.

SOUTH FRANCIS.—Shares are not to be procured at the price you have offered; still I think, by waiting a little while, they may be had at even a lower figure.

TREHANE.—This mine looks well, whilst its value is greatly enhanced by the cutting the lode in Trelawney north ground. The shaft in Trelawney was sunk to cut the lode in the 20, but a cross-cut had to be driven 14 fms. before it was reached—thereby showing the course of ore in Trehane is upwards 100 fms. long.

WHEAL FRANCO is looking very well; at present, I see no reason to fear the discontinuance of the present dividends. When the mine is opened at the lower levels, and these levels turn out anything like promise, the dividends will be much increased.

WHEAL TRELAWNEY.—Since the meeting, a report of which will be found elsewhere, the lode has been cut in the northern ground, beyond Trehane; it is 2½ to 3 ft. wide, the lead being 10 in. wide, and worth 10*l.* per fm.—this adds greatly to the value of the sett.

NORTH FOWEY CONSOLS.—A meeting of adventurers was held at the mine on Tuesday, the 13th inst., when the accounts for May and June were examined and allowed, showing balance against the mine of 212*l.* 19s. 7d.—A call of 1*l.* per share was made; and resolved, "That in consequence of so many parties remaining in arrear of cost, a notice to each defaulter shall be sent, stating that unless such calls are paid, on or before the 11th day of August, that a meeting of the adventurers will be held at the Queen's Head Hotel, St. Austell, and proceedings for the recovery of the same be instituted forthwith."—The following report, from Capts. M. Richards and J. Dally, was read to the meeting:—"The engine-shaft is now down 29 fms. below the surface in good blue killas, with branches of mundic, spotted with ore; we calculate upon sinking from 2½ to 3 fms. per month; we have cleared the shallow adit, and sunk a shaft of 7 fms., and have driven east 8 fms., and are now driving a cross-cut north to cut the lode, to see the character and appearance of it, which we hope to complete in a fortnight or three weeks from this time."

WHEAL ANDREW AND NANGILES.—At a meeting of adventurers, held on Monday last, the accounts, of which the following is an abstract, were submitted and allowed, and the loss ordered to be divided and collected forthwith:—To balance of last account, 708*l.* 19s. 10d.; cost and merchants' bills, 1269*l.* 12s. 5d.=1978*l.* 12s. 3d.—By division of loss, May 17, 708*l.* 18s. 4d.; ores sold (less dues), 704*l.* 13s. 4d.=1413*l.* 11s. 8d.: balance, 565*l.* 0s. 7d.

WHEAL ROSE.—At a meeting of adventurers, held at the mine, on the 13th inst., the following statement of receipts and expenditure for Jan., Feb., and March, was submitted:—By ores sold, 2377*l.* 8s. 10d.; to costs and merchants' bills, 2201*l.* 7s. 7d.: profit for the three months, 176*l.* 1s. 3d.

GREAT POLGOOTH MINE.—With reference to some observations in our Journal of the 10th inst., the growing importance of this mine would seem to deserve the insertion of a few additional particulars, which have been communicated to us from authority upon which we can rely; and, accordingly, we have much pleasure in making them known to our readers.—In the year 1845, a new company was formed for reworking this mine; the few articles the old company had left were purchased of them, and the management was given, as before noticed, to Mr. Thomas Bell. The disadvantages at commencing were great, a powerful stream of water enjoyed by the old company had been otherwise diverted and lost, shafts were run together, and the mine at large, and especially the adits, had been ransacked by tributers at their own discretion. After the usual preliminaries in the way of clearance, and repairing above 4 miles of adit levels, &c., about 11 months since, the engine (previously alluded to), of 80-inch cylinder, was put to work; by it the water is already drained to below the 76 fm. level, and the mine has begun to open out beyond the most sanguine expectations. The sales of tin during the two past months have exceeded 270*l.*, and the accumulation of tinstuff at surface, with rich courses of tin underground, has led to the welcome necessity of erecting another fire-stamps, which, when completed, will raise the returns to above 50 tons of tin per month. It will be seen that there has been no time to make new discoveries, so that the mine may be fairly said to be in about the same state of capability in which she was left by the former adventure; and yet there are, at this time, three winzes in progress of sinking, from the 56 to the 66 fm. level, in each of which is an excellent and improving course of tin. Above 250 men are working on tribute in the mine generally, at from 3s. 6d. to 10s. in the 1*l.*, and earning good wages. In the 76 fm. level just entered, many hundred fathoms of lode are explored, and a great deal of whole ground where it was said none remained; this level is in good order, needing but little repair, and one pitch is already set in it at 4s. 10d. in the 1*l.* From the many thousands of fathoms of backs opened, which will set on tribute at ample remunerating prices, there is abundance to keep all the fire-stamps in profitable working for many years; and this, added to discoveries, which will unquestionably be made, as the working advances, are certain indications of a vastly rich and profitable undertaking. As to the management, engineering, and general agency, the facts above-mentioned sufficiently establish their repute without need of further comment.

NORTH WALES MINING COMPANY.—Our advertising columns contain an announcement, that the directors have resolved on limiting the period for application for shares to Monday next; we are informed, the directors are induced to this step from the number of applications they have received, and from a wish to hasten active operations at the mines. We may add, that the interest which has been attached to mining in Wales, will shortly be greatly enhanced by the public exhibition of some extraordinary specimens of gold that have been shown to us, and which are really very valuable.

ST. JOHN DEL REY.—The advices from the mines of this company, inserted in another column, mention that the produce for the month of April was 126 lbs. of gold, which is about the same as for the month of March; but the cost had increased considerably—namely 356*l.* There appears, indeed, little probability of a reduction, but rather an augmentation, of the expenses of the establishment, in consequence of the very high price of materials and provisions, and the terms of hire of slaves being also much higher.

RESERVE FUNDS.

SIR,—I have an interest in a copper mine in Cornwall, which, though it sells sufficient to pay its expenses, is not paying any dividends at present; there is a large balance in favour of the adventurers, which the agent or purser says cannot be touched, as it is required to keep this large sum as a *reserve*, to meet expenses, in case the sales should not realise sufficient for that purpose. The balance given lately shows an amount in favour of the adventurers of 8000*l.*; and, as I am not satisfied with the explanation given, and depend on the income derived from the source just named, how am I to proceed? To write my shares off in the present depreciated state of things I am unwilling to do, and it is a hard thing to be reduced to a state of starvation, with a balance in my favour on my proportion of shares. The principal party holding shares is too powerful to remonstrate with, and I have been advised to apply to the Stannary Court for redress—but, can that court assist me? and can I bring an action against my partner (for such I imagine the largest holder to be) in that court? His reply is, that holding the largest interest, he acts for the best—that may be; but he does not, as I do, depend on the receipts from the mine for his support, which makes our position widely different. I shall be happy to be advised by some of your correspondents as to what course I had better pursue; and to be informed, if there be a remedy to obtain any part of the balance, which I consider much larger than necessity demands, which is kept in reserve?—M. M. P.: *Kennington, July* 21.

WICKLOW COPPER MINE COMPANY.—It is gratifying to find, in these times of great depression, that the Wicklow Copper Mine Company have been able to declare the usual dividend of 10 per cent. for the half-year on the paid-up capital, and to add a handsome surplus to the reserved fund. This is particularly gratifying at a season of such general distress among the labouring poor, as we understand upwards of 2000 persons derive support from the employmen, afforded by this native company. We should add, that the spirited working of this mine is greatly encouraged by the judicious liberality of the owners of the royalty.—*Irish Railway Gazette.*

CONVERSION OF DIAMONDS INTO COKE.—At the meeting of the British Association, Dr. Faraday exhibited some diamonds, which he had received from M. Dumas, which had, by the action of intense heat, been converted into coke. In one case, the heat of the flame of oxide of carbon and oxygen had been used—in another the oxy-hydrogen flame—and in the third the galvanic arc of flame from a Bunsen battery of 100 pairs. In the last case, the diamond was perfectly converted into a piece of coke—and in the others the fusion and carbonaceous formation were evident. Specimens in which the character of graphite was taken by the diamond, were also shown. The electrical character of these diamonds were stated also to have been changed—the diamond being an insulator, while coke is a conductor.

CLARKE AND VARLEY'S RESILIENT ATMOSPHERIC RAILWAY.—The *Moniteur Industriel*, in a recent number, has devoted two columns in noticing this great improvement on the atmospheric system, which it considers to be the best that has yet been introduced. We are glad to see that our contemporary, although the organ of the Protectionist and anti-English party, and opposed to free-trade and competition, is candid enough to do justice where justice is due. It observes—"France ought to be the foremost in taking advantage of the great improvements making, not only in England, but in every part of the globe—by so doing, she may rank as one of the first among nations. The system of Clegg and Samuda, on the Croydon Railway, has proved a perfect failure, at the expense of the company. The Chambers voted 1,800,000 fr. (72,000*l.*) for a fair trial of the different atmospheric systems in this country on the St. Germain line; but the Minister of Public Works contented himself by adhering exclusively to one, which has absorbed that grant with a similar result. Government sent two missions to England to study the principles of the Clegg and Samuda atmospheric (the failure of which is too well known), and great praise is due to them for having done so; but here is a system, the advantageous results of which cannot be doubted, if carried out. Why does not Government, therefore, send over to England competent engineers to examine and report on Messrs. Clarke and Varley's resilient, or elastic, atmospheric principle of traction?"

BIRMINGHAM AND OXFORD RAILWAY.—It will be recollected that, at the last adjourned meeting of the proprietors of the Birmingham and Oxford Company, a further adjournment took place, in order that a conference might be had between the narrow gauge, or London and North-Western interests, on the one hand, and the broad gauge, or Great Western interests, on the other. This conference has, we are informed, been held; and if what we hear be true, there is, we fear, but little hope of an amicable arrangement being effected between the contending parties.

ITALIAN RAILROADS.—It is reported (says the *Courrier Francais*) that the Prince de Torlonia has concluded an arrangement with the house of Gouin, of Paris, for the railroads of the Papal States. It is said that 1,000,000*l.* will be deposited in the treasury of the Roman Government, as a guarantee for the execution of the works.

The railways from Hanover to Minden, and from Minden to Haman, will be opened for traffic by the 15th October next, at the latest. Though of no great extent, these lines are of considerable importance, from entirely completing the line of railway which unites the east and west of Germany.

AMIENS TO BOULOGNE.—We understand that this railway will certainly be opened to Boulogne not later than October next.

THE PACIFIC OCEAN LINE.—A correspondent of one of the New York journals says—"Whitney's great project of a railway to the Pacific Ocean attracts much attention here. An elaborate account of his proposed railway has been republished in most of the journals. Mr. Witney expects to raise a portion of the funds necessary to carry on the work in this country, notwithstanding the deplorable state of trade here, and the present antipathy to railway schemes of every kind; yet I should not be at all surprised to find John Bull launching out his thousands of pounds for the purpose of assisting the projectors of this gigantic American enterprise."

THE HIGH LEVEL BRIDGE.—On Friday, one of the metal arches for this great undertaking was tested at Messrs. Hawks, Crawshay, and Co.'s works, in the presence of Robert Stephenson, Esq., and several other scientific gentlemen. The arch is constructed on the bowstring principle, and is 125 feet span. The ends will rest upon metal plates fixed in the pier, and a small space will be left for the alternate expansion and contraction of the arch. The arch consists of four ribs, each 3 ft. 9 in. broad, of solid metal. The under roadway is suspended from these ribs by means of rods, which pass down the centre of the pillars—the upper part of these pillars serving at the same time as supports for the upper roadway. There are also 14 transverse, and 8 longitudinal girders, which bind the whole compactly together—the balustrades are in keeping with the rest of the work. The arch was tested by a weight of 500 tons being put upon it, being double the weight to which it can by any possibility be put by the trains, &c., passing over it; and the result gave the most decided satisfaction to all present. With respect to the other works on the river, and the approaches on each side, all is progressing steadily, but slowly. The piles for the southernmost river arch are so far completed, that the foundation stone is expected to be laid during this week. The approaches on the south side are rapidly advancing, most of the pillars for the arches are already erected. Several of the metal pillars which form the direct approach are also reared at the Gateshead side of the river.—*Newcast's Advertiser.*

BARON VON RATHEN'S COMPRESSED AIR LOCOMOTIVE.—In our Journal of the 12th June (see *Mining Journal* of the 19th), we made mention of some experiments which we had the pleasure of witnessing at the College for Civil Engineers, Putney; which had for their object, to test the practicability of Baron Von Rathen's new plan (patented, but still unspecified) of working locomotives by compressed air. We stated, that we had seen on that occasion air compressed to upwards of 850 lbs. per square inch, and this enormous power was set free again with the greatest facility for locomotive purposes—that is to say, not all applied at once, but "set free," or let off, as wanted, in quantities proportionate to the work performed. We noticed further, that there was a common-road locomotive in the course of building at the workshops of the college, which was intended to be worked on this plan. Since then some additional experiments have been exhibited by Baron Von Rathen; for the following particulars of which we are indebted to an eye-witness:—On the 8th instant, the compressed air reservoir was again charged to upwards of 800 lbs. per square inch, in the presence of a number of gentlemen, who have associated to make trial of Baron Von Rathen's system; and if that trial prove successful (of which there seems now every probability), to promote its general adoption, both on railways and common roads; and, in order to show the perfect control under which this prodigious force is kept, and the ease with which it may be applied, in more or less abundance, the air was allowed to escape from the reservoir, at intervals, regulated solely by the pleasure of the persons superintending the experiment. The noise made by these successive escapes of air, was like that of a battery of cannon. Another point which remained to be practically demonstrated, was the length of time which the reservoir was capable of retaining a body of air under so high a state of compression; and in that respect also the result was in the highest degree satisfactory. Four days after the experiment just described, the reservoir was again tried, in the presence of the Duke of Buccleugh (the enlightened and public-spirited patron of the college), and several other noblemen and gentlemen—being still in the same state in which it was left on the 8th inst., and reduced only in its original force by the amount of air discharged from it on that occasion. The working power of the apparatus was now found to be, for all practical purposes, in as high a state of perfection as ever—the air issuing with apparently undiminished elasticity from its state of confinement, and with a noise which could only be likened, as before, to that of heavy artillery. Of no other motive power yet invented can it be said that it is capable, like this, of being stored up in any quantities, not only till the occasion arrives for its use, but in a state always fit for instant use; stored up, moreover, in vessels which may be either stationary, or carried about from place to place. Of no other known power either, can it be said, with so much truth, that it is unlimited in its source, and free from everything like nuisance in its application.—*Mechanics' Magazine*, of this day.

NEW GALVANOMETER.—At the meeting of the British Association, Mr. Ward exhibited a new galvanometer, in which the current is measured by the deflection of the conducting wire by a permanent magnet. The coil of wire being placed vertically over the poles of the magnet is free to move, and as the current is more or less powerful, the coil requires a greater or less weight to bring it to its original position; hence the force of the current is expressed in grains instead of in degrees.

THEFTS OF LEAD ORE IN MOLD.—Through the activity of John Williams, the police-officer of Buckley, an extensive and systematic plundering of lead ore has been detected. It appears that the officer met a man with a cart load of ore, and, suspecting all was not right, entered into conversation with the driver, and eventually apprehended him; and having got a further clue, captured five more, who were all committed for trial. For several months, scores of tons of ore have been missed from the works near Mold, and remained undetected until now, though there is a regular police.—*Liverpool Standard.*

Death of James Ryan.

We regret to announce the decease of MR. JAMES RYAN, the coal-draining veteran, at Dudley, on Wednesday last, in the 78th year of his age. At the time of his death, Mr. Ryan was in the receipt of a pension of 50*l.* a-year, from the Right Hon. Lord Ward: he leaves one daughter, wholly unprovided for; but, it is hoped, that his Lordship will either continue his kind patronage to her, or interest himself in procuring her the means of gaining a livelihood. Mr. Ryan was perfectly conscious, up to within a day or two of his death, and nearly his last words had reference to his natural drainage system. He was much respected by a numerous body of friends, and received a visit from his only opponent in the neighbourhood on Monday last.

NEW PATENTS.

J. J. Baranowski, Rue Neuve Clichy, Paris, for a ready-reckoning machine.

J. Lethwaite, Halifax, York, for certain improvements in numbering-machines.

H. J. Perlback, Hamburgh, for an improved method or methods of uniting certain metals and alloys of metals.

H. S. Rayner, Ripley, Derby, for certain improvements in propelling on land and water.

W. Heasman, Woburn, Bedfordshire, for improvements in thrashing machines.

P. A. Lecomte de Fontainemoreau, South-street, Finsbury, for improvements in machinery for preparing cotton and other fibrous substances.

H. Bessemer, Baxter-house, Old-street, St. Pancras-road, Middlesex, for improvements in the manufacture of plates, sheets, or panes of glass.

W. S. Henson, London, for improvements in the construction of razors for shaving.

B. W. Sievier, Henrietta-street, Cavendish-square, Middlesex, for improvements in stamping, marking, cutting, embossing, or printing.

J. Whitley, Botany, Bingley, Yorkshire, for improvements in the mode of washing, scouring, and dying of wool, alpaca, mohair, cotton, and other fibrous substances.

Edward Light, Esther-terrace, Bermondsey, for improvements in apparatus for supporting or buoying up persons, boats, and other bodies, when in the water.

J. Tall, Bineton, Surrey, for improvements in apparatus for setting saws.

E. Slaughter, Avon-side Iron-Works, Bristol, for improvements in locomotive engines.

A. Bernhard Von Rathen, Putney, Surrey, for certain universal wheels, or improved direct rotatory engines, to be worked by steam, air, or any other elastic power.

J. Sykes and A. Ogden, both of Huddersfield, York, for improvements in machinery for cleaning, wool, cotton, and similar fibrous substances, from burs, motes, and other extraneous matter.—*Mechanics' Magazine.*

PERPETUAL MOTION.—The *Hartford Times* says that a machine is now on exhibition in that city which is claimed to be capable of producing perpetual motion; it is running now, and will be during the continuance of the fair; it is an ingenious contrivance truly, and may lead to useful improvements in machinery; if it does not prove capable, in itself, of driving powerful machinery, and its owners claim this merit for it. The motion (turning of a wheel) is procured by a spring, similar to that of a watch, and the continued winding up is performed by the expansion and contraction of fluid (oil is used, though quicksilver is, undoubtedly, preferable), confined, as in a thermometer, at the base of a rod upon which it acts as the change in the temperature of the atmosphere expands or contracts it. By an ingenious contrivance the revolving axle is made to turn the same way, whether the tendency of the fluid be up or down. The capacity of the machine now on exhibition is sufficient to raise 400 lbs., and the slightest variation from heat to cold acts upon the "winding up" part of the machine. The proprietor says, a clock was attached to one of these machines about two years since, and it has kept it wound up, so that it has run constantly to this time; it is the invention of Col. Boon, of Ohio, who has spent a life and a fortune upon it.

DOVER REFUGE HARBOUR.—We understand, the Messrs. Francis Freeman and Lee, of London, have taken the contract for the carrying out of the breakwater connected with this undertaking, to the amount of 200,000*l.*; and that, so soon as the necessary preliminaries, such as the signing of the contracts, &c., are completed, this great national work will be immediately commenced.

SUNDERLAND DOCKS.—The great contract for excavating the principal dock, building the sea wall, and completing the large basin, comprising an area of 22 acres of water for the Sunderland Dock, was let a few days ago to the eminent contractors, Messrs. Craven and Son, from Staffordshire, for the sum of 135,000*l.* This undertaking is expected to be finished in the summer of 1849.

CHINESE GRANITE.—The vessel *John o'Gaunt* arrived from Shanghae and Hong-kong respectively, has brought, in addition to a general cargo of tea and other Chinese productions, 78 slabs of granite. We know of no former instance of an arrival of this valuable description of stone from the Chinese empire, and this notice of the matter will prove of interest and importance. The importation alluded to took place at the port of Liverpool last week.

DUTCH BRICKS.—A vessel arrived at the port of Liverpool from Rotterdam, has brought, in addition to a general cargo, 20,000 bricks, the manufacture of Holland. These bricks were not, as is usually the case with respect to the article when brought from the Hanseatic ports of Hamburg and Bremen, *en route* to distant parts of the globe, reported as being for exportation only; and as we are not cognizant of any previous parcel of bricks of Dutch manufacture having been landed for home use, this notice of the matter will prove interesting, and of importance.

RAILWAYS IN INDIA.—We understand that the terms finally arranged by the East India Company and the Board of Control, with reference to railways in India, are to this effect:—that the Bengal Comyanies (consisting of the amalgamated East Indian and Great Western of Bengal Companies) shall have 5 per cent. guaranteed for 25 years, and the amount of deposit (to be withdrawn as the works proceed) shall be reduced from 500,000*l.* to 100,000*l.* It is presumed that similar terms as to guarantee will be offered to the Great Indian Peninsula Railway Company, the amount of deposit being, of course, modified in proportion. The Madras Company are placed in rather an awkward predicament, that company having been formally dissolved. It is thought, however, that it will be reorganised—so as to take advantage of the present disposition of the authorities.—*Railway Record*, of this day.

SCOTTISH CENTRAL RAILWAY—DEFEAT OF THE DIRECTORS.—An extraordinary meeting of proprietors was held at Perth, on Tuesday last.—Major MORAY in the chair.—After considerable discussion, resolutions were passed to the following effect:—"That the Marquis of Breadalbane be requested to resume his position as chairman of the board. That having considered the agreement, dated October 21, 1846, between this company and the Caledonian, and other companies, for the lease of the line, and being advised and convinced that such agreement is illegal, declare the same null and void. That it is, in the opinion of the meeting, highly expedient that a permanent arrangement should be entered into with the Edinburgh and Glasgow Company; and that a committee be appointed to consider the proposals made by the directors of that company on the 11th May, 1847, and report thereon at an adjourned meeting, to be held on the 5th of August next; and that the directors be requested to take every means in their power to open the line between Stirling and Castlecary."—An amendment to negative some of the resolutions was proposed by Mr. Swift, the solicitor of the London and North Western Company, seconded by Mr. Tite.—A poll was demanded; the result showed a majority of 11,488 votes, against 2341, in favour of the shareholders' resolutions, and, of course, against the amendment.—It appeared that the Caledonian, Lancaster, and Carlisle, and London and North Western Companies, entered conjointly into an agreement to lease the line for 7 per cent. and half surplus profits; this some of the shareholders wish to annul in favour of leasing it to the Edinburgh and Glasgow Company at 9 per cent. The former companies have expressed a determination to compel the Scottish Central Company to abide by their agreement.

FOR SALE, a 70-inch cylinder ENGINE, without boilers—For price, and further particulars, please apply to Samuel Grose, Esq., engineer, Wall, Gwinear, Camborne. 48

PATENT OFFICE AND DESIGNS REGISTRY, No. 210 STRAND.—Inventors are hereby informed, that the Official Circular of Information, detailing the most economical and proper course for the protection of new Inventions and new Designs, and containing the reduced scale of fees, or further information, may be had (gratis) on application, personally or by letter, pre-paid, to F. W. CAMPIN and COMPANY, 210, Strand (corner of Essex-street), London. 49

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 3154 miles of railway, was 185,955*l.*, thus accounted for:—106,542*l.* for the conveyance of passengers only, 40,264*l.* for the carriage of goods, and a remainder of 39,149*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 25,165*l.*, when the mileage was about 2,290.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	18	£142,900	3 p. c.	£ 237 14 6	£ 231
Chester and Birkenhead	15	656,293	2½	780 1 9	723
Dublin and Drogheda	35	689,248	3½	965 14 5	878
Dublin and Kingstown	7½	473,282	9	1360 1 9	1230
Dundee and Arbroath	16½	156,323	6	1031 9 3	408
Dundee, Perth, and Aberdeen	47	285,748	—	1021 0 0	402
East Lancashire	30½	814,417	—	1012 14 8	—
Eastern Counties	226	6,513,026	7	11615 15 5	9718
Eastern Union	44	531,021	—	1068 16 3	432
Edinburgh and Glasgow	48	2,275,435	6	4231 4 8	4497
Glasgow, Paisley, and Ayr	60½	1,567,281	7	3369 9 6	2875
Glasgow, Paisley, & Greenock	23	835,918	2	1563 17 3	1503
Great Southern and Western	110½	1,343,718	—	1705 5 11	—
Great Western	241	9,714,939	8	21190 8 8	20707
Kendal and Windermere	14	——	—	218 17 5	—
Lancaster and Carlisle	70	978,625	—	1262 13 3	—
London and North Western	378½	18,042,004	10	46471 10 0	45080
London and Blackwall	4	1,102,717	1½	1446 10 5	1528
London, Brighton, & South Coast	137½	5,109,667	7	9469 16 6	7871
London and South-Western	186½	4,278,789	9	11801 18 11	8779
Manchester & Leeds	117½	5,036,391	5½	6911 14 9	7173
Manchester, Sheffield, & Lincolnsh.	49½	1,678,108	5	2179 10 6	2054
Maryport and Carlisle	28	——	—	602 8 8	586
Midland Company	360½	7,962,274	7	20831 3 2	16179
Newcastle and Berwick	65	1,184,079	5	1982 8 8	—
Newcastle and Carlisle	65	1,184,080	5	2586 18 2	2032
Norfolk	70½	1,199,589	7	2524 3 7	1201
North British	72½	1,459,958	—	2073 5 0	1786
Shrewsbury and Chester	17	384,945	—	529 17 10	—
South Devon	20	1,061,383	5	——	803
South-Eastern	157½	5,888,411	3½	10244 15 2	740
Taff Vale	38	888,411	6½	1426 16 11	1779
Ulster	25	358,353	5½	——	9760
Whitehaven Junction	12	91,274	—	213 0 4	—
York and Newcastle	163½	1,712,317	9	4802 1 7	1279
York and North Midland	182½	2,483,356	10	6457 6 0	7229

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Buddle's West Hartley 16 6—Charlotte 16—Chester Main 16—Davison's West Hartley 16 6—Delaval Hartley 15 6—Hasting's Hartley 16 6—North Percy Hartley 16 6—Original Tanfield 15 9—Ord's Redheugh 15 6—South Pearath 15—Stewart's Hartley 16—Tanfield Moor 17 6—Townley 15 9—West Wylam 15 6—West Hartley 16 6—Wylam 15 3—Wall's End Acorn Close 16 9—Barnard 15 6—Bewicke and Co. 17—Bell Robson 16—Framewellgate 16 6—Gosforth 17—Heaton 17—Hotspur 16 3—Hedworth 15 6—Hebburn 16 6—Killingworth 16 9—Northumberland 16 3—Wharncliffe 17—Eden Main 17 6—Belmont 17 3—Braddyll's Hetton 18 3—East Hetton 16 9—Haswell 16 9—Hetton 16 6—Lambton 18—North Hetton Lyons 17—Russell's Hetton 18—Shotton 17 6—Stewart's 18 6—Whitwell 16 9—Hudson's Hartlepool 17 3—High Thornley 16—Seymour Tees 17—Whitworth 15—Cowpen Hartley 16 6—Howard's West Hartley Netherton 17 6 Sidney's Hartley 16 6.—Ships at market, 231; sold, 141; unsold, 140.

WEDNESDAY.—Chester Main 16—Davison's West Hartley 16 6—Delaval Hartley 15 6—Hasting's Hartley 16 6—Original Tanfield 15 6—Ord's Redheugh 15 6—Ravensworth's West Hartley 16 6—Tanfield Moor 17 6—West Hartley 16 6—Wylam 15 6—Wall's End Acorn Close 17—Bewicke and Co. 17—Gosforth 17—Hedworth 15 3—Hilda 16 6—Killingworth 16 9—Riddell's 16 9—Walker 16 6—Wharncliffe 17—Eden Main 17 6—Belmont 17 3—Hetton 18 6—Lambton 18—Russell's Hetton 18—Shotton 17 6—Stewart's 18 6—Whitwell 16 9—Hartlepool 16 6—Hudson's Hartlepool 17 3—High Thornley 16—South Kelloe 17—Thornley 17—Adelaide 17 3—South Durham 18 3—Seymour Tees 17—Tees 18 3—Whitworth 15—Cowpen Hartley 16 6—Derwentwater Hartley 16 6—Howard's West Hartley Netherton 16 6—Sidney's Hartley 16 6.—Ships, 164; sold, 79.

FRIDAY.—Adair's Main 16 6—Carr's Hartley 16 6—Hasting's Hartley 16 6—New Tanfield 16—Ord's Redheugh 15 6—Ravensworth's West Hartley 16 6—Stewart's Hartley 16—Tanfield Moor 17 6—Townley 15 6—Wylam 15 9—Wall's End Gosforth 16 9—Hilda 16 6—Killingworth 16 9—Riddell's 16 9—Walker 16 6—Eden Main 17 6—Belmont 17 3—Braddyll's Hetton 18 to 18 3—East Hetton 16 3 to 16 6—Hetton 16 6—Lambton 18 3—Stewart's 18 6—Whitwell 16 9—Hough Hall 16 6—Adelaide 17 6—Brown's Deanery 16 9—Seymour Tees 17—Tees 18 3—Anthracite 25 6—Cowpen Hartley 16 6—Sydney's Hartley 16 6.—Ships at market, 100; sold, 39; unsold, 61.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 7 per Cent., 196½ 8
3 per Cent. Reduced Ann., 86¾ 9
3 per Cent. Consols Ann., 88¾ ½
3 per Cent. Annuities, —
3½ per Cent. Ann., 90¾ ¼
Long Annuities, 9¼
India Stock, 10½ per Cent., 244
3 per Cent. Consols for Acct., 88¾ ½ ¼
Exchequer Bills, 1000*l.* 3d., 11 8 11 pm.

Belgian Bonds, 4½ per Cent., —
Dutch, 2½ per Cent., 57½ ¾
Brazilian, 5 per Cents., 84½ ¾
Chilian, 6 per Cents., 92½ 3
Mexican, 5 per Cents., 19¼
Spanish, 5 per Cents., 22
Ditto 3 per Cents., 32
Portuguese, 4 per Cents., 30¾
Russian, 5 per Cents., 112½

Mines.—There has been a little more animation in the mining share market this week, and we look forward to a very general improvement from the amount of business completed, and in course of private negociation—several of which have been on the *tapis* for some of the best dividend-paying mines. We, therefore, hope that the speculative public are beginning to see the advantages and profitable results arising from investments of this kind when carefully investigated.

A great many shares have changed hands this week; and in some an advance has taken place. There has been a demand for Callingtons; but present holders are looking for higher prices than buyers are disposed to accede to; the mine, we learn, is looking remarkably well, and it is more than probable that the prices asked may be obtained. The important position which Herodsfoot is taking, has brought these shares also in request—still we do not learn that many transactions have taken place. Herodscombe shares have been inquired for at lower figures; perhaps, under the impression that the call of 2*l.* per share, recently made, will bring sellers into the market; but we think the firmness of holders, and the appearance of the mine, will not allow of much, if any, depression in price.

Mary Anns have been done at our present quotation; and the appearances of the mine will, no doubt, increase their price—there being buyers, and an improvement in the 15 fm. level.

The change in the management, which has taken place in Trelawney, will, in all probability, give greater confidence to absent shareholders—sellers will become scarce, and prices, in consequence, advance.

Trehanes, it is presumed, will also be sought after, from the arrangements now in contemplation at the mine, and the increased length of ore ground proved by the cutting of the lode in North Trelawney.

Treviskey and Barriers, Condurrows, East Wheal Rose, Carn Brea, North Pool, East Pool, and Treleighs, are saleable; but, in some of these shares, business can only be done by private negotiation.

Carn Brea directors declared a dividend of 3*l.* per share on the 9th, payable the 12th August, this being the *fifty-fifth* dividend from this great and productive mine—the mine is looking remarkably well, and there is a disposition to purchase.

The account day of Treviskey and Barrier, held on the 19th, declared a dividend of 12*l.* per share in the former, and 25*s.* per share in Barrier, which has been a source of gratification to the absent shareholders, not anticipating so much; the mines are looking well.

Shares in the following mines have changed hands this week—viz.: Mary Ann, Herodsfoot, Dartmoor Consols, Devon and Courtenay, East Crowndale, Treleigh, Carn Brea, West Providence, Gwinear Consols, Trelawney, West Basset, North Roskear, West Seton, Maria (tin), Stray Park, Herodscombe, Treviskey and Barrier, &c.

Wheal Barbara, Cascade, and Gadair Mines are assuming favourable notice, and large transactions have taken place in them during the week. Shares are now much in demand, particularly in Barbara, at to-day's prices.

The slight decline in Pennant shares appears to have been caused by some timid holders having sold, on the announcement of the general meeting of the company, for the purpose of making a call.

In the foreign shares the business has been slight—Bolanos and Imperial Brazilians appear to have been the shares that have changed hands.

A company has been formed during the week for working some mines in North Carolina; the shares, we learn, have been nearly all taken up, the division being 1200 shares, at 12*l.* 10*s.* per share. Certainly the specimens of ores which we saw were splendid, and so also the premium, if we are correctly informed, of 6000*l.* to 7000*l.*, falling into the pockets of the two fortunate projectors.

By advices from India, we find that the metal market has been very quiet during the previous month; holders not disposed to accept lower prices, whilst dealers are precluded buying at the quoted prices, on account of the tightness of the money market—consequently, but little business has been done, especially in copper.

The Hong Kong market appears to be firm, particularly in iron and steel. In lead, tin, and tin plates, but little business had been done, still the prices quoted are firm.

Railways.—The transactions in the share market since our last have been unusually limited, and prices on the decline. Parties do not seem disposed to invest in railway stock at present, when money is so much in demand; and, even in lines whose weekly revenue is on the increase, the value of the shares is far from improving; indeed, while other descriptions of stock remain depressed, and money is scarce, we can hardly look for much improvement in railway shares.

At Messrs. Lamond's sale, on Wednesday, the market was firm, without much change in quotations.

HULL, Thursday.—The chief feature of the past week has been the sudden—generally and unlooked for—advance in the price of new Berwicks: they are to be converted from scrip into registered shares, and to be equal in value to York and Newcastle new, from the 1st of January next. In shares generally the smallest possible amount of business is passing. Kingston Cotton Mills are in rather improved request, but Glass shares are heavier, in consequence of the call. The former can be sold at 15*l.* dis., and the latter can be bought at 2½*l.* dis.

LATEST CURRENT PRICES OF METALS.

LONDON, JULY 23, 1847.

	£	s.	£	s.	d.
Iron—Bar *a*..Wales..*ton*	8	10—	8	15	0
„ ..London ..	0	0—	9	10	0
Nail rods „	0	0—	10	10	0
Hoop (Staf.) „	0	0—	11	15	0
Sheet „	0	0—	13	0	0
Bars „ „	0	0—	11	5	0
Welsh cold-blast foundry pig ..	4	10—	5	5	0
Scotch pig *b*, Clyde	0	0—	3	10	0
Rails, average	0	0—	9	0	0
Russian, CCND *c* ..	0	0—	—		
„ PSI	0	0—	—		
„ Gourieff	0	0—	—		
„ Archangel	0	0—	13	10	0
Swedish *d*, on the spot	11	5—	11	10	0
„ Steel, fagt.	0	0—	16	5	0
„ „ kegs *e*	11	15—	15	0	0
Copper—Tile *f*	0	0—	97	0	0
Tough cake	0	0—	98	0	0
Best selected	0	0	101	0	0

	£	s.	£	s.	d.
Copper—Ordin. sheets, *lb.*	0	0—	0	0	11
„ bottoms .	0	0—	0	0	12
Yellow Metal Sheathing	0	0—	0	0	9½
Tin—Com. blocks *g*..*cwt.*	0	0—	4	8	0
„ bars	0	0—	4	9	0
Refined	0	0—	4	11	0
Straits *h*	4	4—	4	5	0
Banca	4	18—	5	0	0
Tin-Plates—Ch., IC *i*, *box*	1	8—	1	11	0
„ IX ...	1	14—	1	17	0
Coke, IC	0	0—	1	5	0
„ IX	0	0—	1	11	0
Lead—Sheet *k* ....*ton*	0	0—	19	10	0
Pig, refined	0	3—	20	5	0
„ common	18	10—	18	15	0
„ Spanish, in bd.	0	0—	18	0	0
Spelter—(Cake) *l* on spot	20	0—	20	5	0
„ for arrival	0	0—	20	0	0
Zinc—(Sheet) *m* export.*	0	0—	27	0	0
Quicksilver *n* ....*lb.*	0	0—	0	4	6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ¾-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[*From our Correspondent.*]

Iron.—A good demand continues for Welsh bars, and price is very firm. Scotch Pig has fluctuated a little this week, but the transactions have been limited, and holders will not take less than 70*s.* for mixed Nos. In Swedish Iron and Steel very little doing since last *Mining Journal*.—Copper is steady.

Tin (English) is in good demand, both for home use and exportation. Straits and Banca maintain the quotations, but no recent sales made.

Tin-Plates in fair demand.—Lead is in more request, and the smelters have made large sales within the last 10 or 12 days.

Spelter continues steady as to price, but the demand has rather fallen off.

GLASGOW PIG-IRON TRADE, July 22.—Since date of last *Mining Journal*, a fair amount of business has been done. The fluctuations in price have been frequent, but inconsiderable in extent. Sales of mixed Nos. have been made at 70*s.* and 71*s.*—cash in 14 days. There is less inquiry to-day than for some days past. For mixed Nos. the price may be quoted nominally 70*s.* cash—free on board.

CALCUTTA, June 9.—This market has been quiet throughout the month, neither holders nor dealers having manifested much disposition to operate—most of the former appearing convinced of prices rallying ere long, whilst the latter have been prevented from coming forward by the tightness in the money market. In Copper sales have been extremely light throughout; whilst, of late, there has been scarcely any thing doing, although some holders have been attempting to force sales, by submitting to a decline—especially on tile, the present value of which is 33 Sicca rupees against 33·14, about a fortnight back. In Spelter, also, scarcely any thing has been done, and prices have rather a downward tendency. The low prices current for Iron have at last attracted attention, and holders being firm, the little business that has been done has been at an advance on previous rates; but, even at this, many parties are now indisposed to realise.

CANTON, May 21.—Iron still keeps firm, stocks being small, but sales have been very limited. Stocks of Steel are small, and imports would affect present rates. No sales of Lead, Tin, or Tin-plates, but prices are firm, and stocks small.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending July 17, was 15,062; amount of money, £62 15*s.* 2*d.*

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7	12
512	Albert Consols	1	2½
1024	Alfred Consols	4½	40
256	Alternum Consols	2	12
235	Andrew and Nangiles	26½	16
10000	Ayrshire Iron Company	5	4½
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	2	—
1000	Barristown	4½	12
4000	Bedford	2½	3½
128	Besore Lead Mine	14	10
315	Birch Tor Tin Mine	24½	7½
8000	Blaenavon	50	17
100	Botallack	175	140
120	Brewer	5	7
10000	British Iron, New, regis.	10	18½
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	40
128	Burthy	20	21
100	Bwlch Cwmerfin	20	—
128	Callestock	17	30
1000	Callington	19	29-30
256	Caradon Copper Mine	9½	1
256	Caradon Mines	22½	17
256	Caradon United	24	10
256	Caradon Wh. Hooper	20	4
1000	Carn Brea	15	105
2048	Carmarthen Consols	2	3
2048	Cascade	1	1
112	Charlestown	200	100
166	Cleveland	9	6½
512	Coatlithe Hill	½	1¼
1900	Combmartin	7½	3
500	Comblawn	1½	1½
128	Comfort	45	80
256	Condurrow	20	30
2560	Cook's Kitchen	14	5½
1000	Coombe Valley Quarry	1½	1¾
1000	Copper Bottom	1	5
1024	Cosheen	4½	20
240	Craddock Moor	15½	15
128	Creeg Braws	120	100
500	Cubert Mine	12½	23
2048	Dartmoor Consols	2	4
7100	Derwent	8½	5
1024	Devon&Courtenay Con.	6	3½
1000	Dhurode	2	5
186	Dolcoath	30	50
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
256	East Alvenney	6	10
112	East Caradon	42	42
2048	East Crowndale	4½	1½
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	20
100	East Relistian	22	40
9000	East Tamar Consols	1¾	2
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	310
256	East Wheal Fortune	2	3
128	East Wheal Rose	50	1300
2048	East Wh. Rough Tor	¼	2
—	East of Scotland Iron Co.	2½	1½
123	East Wheal Seton	14	20
256	Elborough	1½	2½
256	Exmoor Wh. Eliza	3½	11
512	Fowey Consols	40	45
6400	Gadair	2	2
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	2	1½
2048	Georgia Tin Mines	1½	1½
256	Gonamena	31½	70
128	Goonvrea	4	1½
244½	Grambler & St. Aubyn	—	15
100	Great Consols	1000	400
256	Great Callestick Moors	22	25
2560	Great Michell Consols	1½	4
256	Great Resugga Moor	3	3½
512	Gt. Wh. Rough Tor Con.	6½	36
1500	Great South Tolgus	2	2
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	25
1000	Hanson	14	2
1000	Harrowbarrow Old Mine	8½	2
800	Hawkmoor	3	2
6000	Heignston Down Con.	½	2½
256	Herodscombe	2½	9
256	Herodsfoot	14	15
10000	Hibernian	12½	1½
—	Hobb's Hill	4	3
1000	Holmbush	19	8
827	Kirkcudbrightshire	5½	8½
2048	Lamherooe Wh. Maria	9	3
2048	Lanivet Consols	4	2½
200	Larkholes	1	3
128	Lelant Consols	90	60
160	Levant	—	90
1000	Lewis	15	6½
1280	Llancynfelin	6	—
1000	Llwyn Malees	5	—
3600	Llynvi Iron	50	60-65
256	Lostwithiel Consols	7	7
128	Ludcott	3	3
4000	Marke Valley	10	—
5000	Mendip Hills	2	1½
0000	Mining Co. of Ireland	7	6½
256	New East Crowndale	3½	3½
128	North Fowey Consols	25	20
100	North Pool	45	250
70	North Roskear	10½	400
512	North Treburget	2	3
100	North United	72	15
256	North Wh. Abraham	½	12
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	8
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
128	Par Consols	900	1000
256	Penhallow Moor	15	4
4000	Pennant	1	2½
100	Penrhiw	30	65
256	Pentuan Wheal Mary	2½	6
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	15
512	Plymouth Wh. Yeoland	4½	22
2048	Prince Edward	1½	1½
112	Providence Mines	35	45
256	Redruth Consols	3	2
10000	Rhymney Iron	50	30
10000	Ditto New	7	6½
256	Rose Consols	10	12
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
—	Shotts Iron Company	50	65
2500	Silver Valley	4	2
128	South Caradon	10	410
2000	South Dolcoath	2	2

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
256	Sth. Friendsh. Wh. Ann	16	14
200	South Harvannah	23	26
9000	South Tamar	¼	¼
256	South Tolgus	2½	18
800	South Towan	10	1½
256	South Trelawney	15½	10
128	South Yeoland	16½	20
128	South Wheal Basset	110	65
124	South Wh. Francis	160	210
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2½
256	South Wheal Rose	11½	1
10000	Southern&Western, Irish	2	4-5
280	Spearne Moor	30	40
256	St. Austell Consols	8	14
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
1000	Stray Park	43	30
9600	Tamar Consols	5	5½
1024	Tavy Consols	3½	4½
6000	Tincroft	7	8
1000	Tin Vale Consols	2	2½
256	Ting Tang	15	10
128	Tokenbury	143½	10
256	Trehane	2	23
5000	Treleigh Consols	6	4½
2000	Trenance	2	—
256	Trenow Consols	30	15
96	Tresavean	10	250
120	Trethellan	5	27½
120	Treviskey and Barrier	130	160
256	Trewollack	20	15
128	Trewellard	12	26½
6000	United Hills	5	½
100	United Mines	300	400
256	Wellington Mines	15	30
128	West Basset	45	25
256	West Caradon	20	168
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Grambler	7	8
—	West Kekewich Consols	—	3
256	West Providence	1	18
200	West Seton	40	60
—	West of Scotland Iron Co.	210	212
120	West Trethellan	5	35
256	West United Hills	2½	4
256	West Wh. Friendship	7½	4
3845	West Wheal Jewel	11	2½
2560	West Wh. Maria	1½	½
2560	West Wheal Rough Tor	½	2
256	West Wheal Shepherd.	5	2½
256	West Wheal Tolgus	21½	3
256	West Wheal Treasury	19	8-9
5200	Wicklow Copper	5	12
184	Wheal Adams	41	10
1000	Wheal Agar	—	8
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	2	5
237	Wheal Anderton	16½	26
128	Wheal Ann	—	50¾
128	Wheal Arvose	3½	4
1024	Wheal Ash	3	12
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	3
256	Wheal Benny	6½	5
256	Wheal Blencowe	8	10
256	Wheal Bucketts	20	22
256	Wheal Byon Consols	½	½
256	Wheal Calstock	3	4
136	Wheal Clifford	190	190
128	Wheal Courtenay	—	20
6000	Wheal Curtis	1½	½
256	Wheal Dyke	12	13
256	Wheal Fortescue	5½	8
512	Wheal Fortune Consols	3½	6½
2048	Wheal Frederick	2	2
388	Wheal Franco	27	40
1024	Wheal Grace	3	2½
128	Wheal Harriet	45	50
256	Wheal Jane	16	30
256	Wheal Kekewich	4	4
256	Wheal Louisa	7½	12
112	Wheal Margaret	79	250
256	Wheal Maria (Hayle)	19	12
1024	Wheal Maria	1	350
4000	Wheal Martha Consols.	5	2
512	Wheal Mary Ann	5	26
256	Wheal Mary Consols	38	25
256	Wheal Mary (Lanivet)	6½	4
256	Wheal Maude	1½	1½
128	Wheal Pollard	12½	12
210	Wheal Prospect	4	7
120	Wheal Reeth	27	30
128	Wheal Rose	60	45
2048	Wheal Samson	—	20
99	Wheal Seton	214	850
256	Wheal Sisters	29½	35
256	Wheal Sophia	3½	10
128	Wheal Spearne	10	75
128	Wheal St. Ann	9	15
260	Wheal Trelawney	7½	117½
256	Wh. Tremaine (St. Ervan)	1½	20
256	Wheal Tremayne	35	35
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	265
128	Wheal Venland	12½	10
256	Wheal Vlow (Perranz.)	½	½
184	Wheal Vyvyan	—	60
256	Wheal Williams	6	18

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	14½	3¾
15000	Asturian Mining Co.	10	6¾
20000	Australian	2	6½
10000	Anglo-Mexican Co	100	2
12374	Ditto Subscription	25	2½
3000	Bolanos	150	6½
2000	Ditto Scrip	15	6½
12000	Brazilian Imperial	20	6½
10000	Cobre Copper Co.	40	25
8500	Colombian Co. regis.	55	} 1
5000	Ditto Scrip	5½	}
5000	Copiapo Mining Co.	14	3
10000	General Mining Ass'n.	20	15½
5000	Kinzigthal Mining Ass.	2	4½
20051	Mexican Company	59	—
2000	Mexican & South Amer.	7	3
5000	Mocanbas & Cocaes	25	4½-5
29320	{ Rl. del Monte, regis. / Ditto unregistered }	28½	av. 2½
	Ditto Red Debentures	—	20
	Ditto Black ditto	—	14
	Ditto Loan Notes	150	97½
7000	Royal Santiago	10	5
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	9
43174	United Mexican	28½	2

SOUTH AUSTRALIAN SHARE MARKET.

Shares.	Company.	Paid.	Price.	Shares.	Company.	Paid.	Price.
2000	Adelaide	5	7½	18	South Para	15	50
600	Barossa Range	4	24	1000	Poonawurta	—	9½-10
2464	Burra Burra	5	110	400	Princess Royal	34	250
436	Grand Junction	15	28	10000	Royal Mining Company	½	1½
200	Greenock Creek	5	12	10000	Royal South Australian	—	55½
100000	Scottish Invest. Co.	1	1½	600	Victoria	2	3
500	Wakefield	2	3				

SOUTH AUSTRALIA AND NEW ZEALAND.

Shares.	Company.	Paid.	Price.
100000	North British Australasian (Kaw-aw, &c.)	1	1

**** We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

JOINT-STOCK BANKS.

Shares.	*Companies.*	*Paid.*	*Div. p. cent.*	*Price.*
22,500	Australasia	£40	£3	£19½ 20½
20,000	British North American	50	5	45 46
20,000	Colonial	25	5	15½ 16
—	Commercial of London	20	6	22 23
4,000	Ionian State	25	6	24½ 25
60,000	London Joint-Stock	10	6	17½ 17
30,000	London and Westminster	20	6	26½
10,000	National Provincial of England	35	5	36
20,000	National of Ireland	22½	5	19
20,000	Provincial of Ireland	25	8	44½
4,000	Ditto New	10	8	16
20,000	Union of Australia	25	6	23½ 24
10,000	Ditto New	2½	6	2½ 2½
60,000	Union of London	10	5	12½ 13

Explosion of Fire-damp at Abercanaid.—An explosion of fire-damp took place, on Friday last, at one of the pits belonging to Anthony Hill, Esq., by which three men were severely burnt, and a lad, aged 12, killed on the spot; two horses were also burnt so badly, that one of them died in less than 12 hours.

Cyfarthfa Collieries.—L. Charles was seriously injured by the falling of a stone—it was a considerable time ere five or six men could remove it.

COPPER ORES.

Sampled July 7, and Sold at Pearce's Hotel, Truro, July 22, 1847.

Mines.	*Tons.*	*Price.* £	s.	d.
Devon Gt. Cons. } Wh. Maria }	97	£8	9	0
ditto	87	7	3	0
ditto	86	8	2	6
ditto	76	8	12	0
ditto	74	6	13	6
ditto	39	7	2	6
Wh. Josiah	84	6	7	0
ditto	53	6	6	6
ditto	50	6	18	0
ditto	49	6	7	0
Wh. Fanny	100	8	8	6
Tresavean	79	3	6	0
ditto	68	4	13	0
ditto	68	4	13	0
ditto	61	3	10	6
ditto	59	4	7	0
ditto	49	3	10	6
ditto	32	2	5	6
Treviskey	101	6	14	6
ditto	82	6	1	6
ditto	80	4	7	6
ditto	57	8	3	6
ditto	31	2	13	6
West Caradon	99	6	15	6
ditto	92	6	8	0
West Caradon	75	£7	4	0
ditto	48	12	0	6
ditto	37	4	8	0
Poldice	62	4	10	6
ditto	60	5	13	0
ditto	59	5	4	6
ditto	54	5	3	6
ditto	45	4	13	6
ditto	30	6	1	6
ditto	14	3	8	6
Fowey Consols	107	8	1	6
ditto	106	6	12	0
ditto	104	6	10	0
Wh. Friendship	91	9	9	6
ditto	87	7	12	6
ditto	32	5	6	6
Wh. Jewel	68	2	13	0
ditto	38	7	17	6
ditto	28	5	5	0
Bedford United	103	7	8	6
Barrier	94	4	3	6
Holmbush	60	5	13	0
Ting Tang	59	4	1	6
Wh. Maiden	30	5	3	6
South Towan	13	5	8	0
Wh. Unity Wood	6	7	1	0

TOTAL PRODUCE.

Mines	Tons	£	s.	d.
Devon Gt. Cons.—Wh. Maria, Wh. Fanny, Wh. Josiah }	795	£5938	9	0
Tresavean	410	1506	9	0
Treviskey	351	2076	5	6
West Caradon	351	2539	10	6
Poldice	332	1696	9	0
Fowey Consols	317	2242	4	6
Wh. Friendship	210	£1696	0	0
Wh. Jewel	134	626	9	0
Bedford United	103	764	15	6
Barrier	94	392	9	0
Holmbush	60	339	0	0
Ting Tang	59	240	8	6
Wh. Maiden	30	155	5	0
South Towan	13	70	4	0
Wh. Unity Wood	6	42	6	0

Average Standard..........£103 8 0 | Average Produce 8½
Average Price per ton £6 4 0
Quantity of Ore .... 3265 tons. | Quantity of Fine Copper, 283 tons 8 cwts.
Amount of Money £20,326 4 6
LAST SALE.—Average Standard......£105 10 0.—Average Produce 8½

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Company	Tons	£	s.	d.
Mines Royal	235	£1316	16	8
English Copper Company	491	3153	18	6
Vivian and Sons	769	5294	2	9
Freeman and Co.	628	3093	17	3
P. Grenfell and Sons	179	1116	14	4
Crown Copper Company	16	186	12	2
Sims, Willyams, and Co.	434	2413	13	8
Williams, Foster, and Co.	510	3800	9	2
Total tons	3265	£20,326	4	6

Copper ores for sale on Thursday next, at Pearce's Hotel, Truro.—Mines and Parcels.—Consolidated 1055—United Mines 1000—South Caradon 433—Perran St. George and Bolenna 365—Par Consols 264—Treleigh Consols 239—Wh. Comfort 237—St. Aubyn and Grambler 221—Trethellan 203—Wh. Sisters 180—Wh. Ellen 108—Wh. Andrew and Nangiles 77—Wh. Clifford 76—Wh. Mary Consols 50—Wh. Prudence 41—Redruth Consols 20—St. Austell Consols 20—Wh. Union 6—Bavis Moor 5—Wh. Buller 3.—Total, 4603 tons.

Copper ores for sale on Thursday week, at Tyack's Hotel, Camborne.—Mines and Parcels.—Camborne Vean 642—Wheal Seton 635—North Pool 603—East Wheal Crofty 581—Tincroft 545—Dolcoath 372—Fowey Consols 300—South Wheal Basset 254—South Wheal Francis 241—Condurrow 222—Wheal Buckets 135—East Pool 94—Lanivet Consols 88—Wheal Vyvyan 62—Wheal Ruby 10—Wheal Courtney 10.—Total, 4794 tons.

COPPER ORES.

Sampled June 30, and Sold at Swansea, July 22, 1847.

Mines.	Tons.	Prod.	Stand.	Price. £	s.	d.
Cobre	106	14½	95½	£11	4	0
ditto	102	14	95	11	1	0
ditto	101	14½	94½	11	9	0
ditto	80	14½	94½	11	11	0
ditto	97	24½	87½	19	1	0
ditto	66	22½	90½	17	15	0
Copiapo	86	27½	90	22	11	0
ditto	72	26½	90½	21	15	6
ditto	70	27½	90½	22	7	0
ditto	67	27½	90	22	15	6
ditto	88	23½	92½	19	10	6
ditto	61	24½	91½	19	18	6
Pennsylvania	78	13½	95½	10	12	0
ditto	75	8½	102½	6	12	0
ditto	71	9½	100	7	0	0
ditto	66	18½	92	14	11	0
ditto	64	19½	89	14	15	0
ditto	53	13½	96	10	14	0
Burra Burra	97	34	88½	27	15	6
ditto	76	36½	88½	29	15	0
ditto	75	30½	90½	24	15	6
ditto	4	25½	88	20	0	0
ditto	2	30½	87	24	10	0
Burra Burra	60	22	91	£17	15	6
ditto	53	34½	88	28	7	0
ditto	52	20½	92½	16	9	6
ditto	48	36½	87½	29	9	6
ditto	38	34½	88½	28	5	6
ditto	19	24½	88½	19	5	6
Berehaven	100	9½	102½	7	6	6
ditto	98	9½	102½	7	6	6
Tigrony	64	4½	120	3	9	0
ditto	39	4½	118	3	10	0
ditto	38	4½	118	3	10	0
ditto	6	3½	128½	2	5	6
ditto	1	54	78½	40	0	0
Cronebane	1	54	78½	40	0	0
Cuba	95	13½	94½	11	15	0
ditto	36	2½	131½	1	4	0
Knockmahon	113	8½	104½	6	12	0
Laxey	60	5½	113½	4	2	6
San Andreas	20	9½	101½	7	5	0
ditto	19	8½	104½	6	7	0
ditto	18	8½	101	6	14	0
Ballygahan	33	5½	106½	3	17	0
Kaw-aw	7	13½	94½	10	15	5

TOTAL PRODUCE.

Mines	Tons	£	s.	d.
Cobre	552	£ 7414	2	0
Copiapo	444	9531	3	0
Pennsylvania	407	4290	4	0
Burra Burra	254	6942	6	0
Burra Burra	270	6281	4	6
Berehaven	198	1450	7	0
Tigrony	148	543	16	0
Cronebane	1	£ 40	0	0
Cuba	131	1159	9	0
Knockmahon	113	745	16	0
Laxey	60	247	10	0
San Andreas	57	386	5	9
Ballygahan	33	127	1	0
Kaw-aw	7	75	5	0

Total tons, 2675.—Amount of money, £39,234 8*s.* 6*d.*

Copper ores for sale August 5.—Berehaven 100, ditto 82, ditto 80, ditto 60, ditto 36.—Cobre 81, ditto 76, ditto 67, ditto 27, ditto 64.—Cronebane 82, ditto 53, ditto 50, ditto 30.—Tigrony 9.—Copiapo 100, ditto 83.—Chili 64, ditto 55, ditto 40.—Cuba 94, ditto 60.—Holyford 90, ditto 63.—Burra Burra 74, ditto 50, ditto 70, ditto 9.—Llandudno 31, ditto 29.—Princess Royal 33.—Vine Slag 11, ditto 10.—Llanidloes 12.—Total 1875 tons.

Copper ores for sale August 12.—Knockmahon 479.—Chili 371.—Cobre 292.—Cronebane 283.—Copiapo 203.—Cuba 157.—Glasgow Slag 77.—Burra Burra 51.—Princess Royal 50.—Ballymurtagh 47.—Vine Slag 20.—Total 2030 tons.

BLACK TIN.

Mines.	*Tons.*	*Price per ton.* £	s.	d.	*Purchasers.*
Drake Walls	4½	£47	0	0	Daubuz and Williams.
ditto	6	37	0	0	Calenick Co. & Williams.
ditto	5½	26	5	0	Calenick Smelting Co.
ditto	1	22	10	0	ditto
St. Agnes Consols	3	45	12	6	Daubuz.
ditto	9	42	0	0	Calenick Co. & Williams.
ditto	½	33	5	0	Daubuz.
Wheal Beam (Devon) ......*Cwts.*	18	45	5	0	ditto
ditto	10	41	15	0	ditto
ditto	17	43	2	6	ditto
ditto	4	19	0	0	Calenick Smelting Co.

LEAD ORES

Sold at the Mine, on the 16th and 17th of July, 1847.

Mines.	*Tons.*	*Amount.* £	s.	d.	*Purchasers.*
Cargoll	86	£15	15	6	Walker and Co.
East Tamar Consols	40	12	2	0	Tamar Smelting Co.
Herodsfoot	45	13	7	6	Sims, Willyams and Co.
ditto	30	4	0	0	Combmartin Co.

Sold at the Mine, on the 20th July, 1847.

Mines.	*Tons.*	*Amount.* £	s.	d.	*Purchasers.*
Cairnsmore	22½	£10	1	6	Walker and Co.
ditto	8½	8	1	0	ditto

CORNISH STEAM-ENGINES.

The number of pumping-engines reported for the month of June is 25—the quantity of coals consumed being 1722 tons, lifting, in the aggregate, 16,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 54,000,000 lbs. lifted 1 foot high by the consumption of a bushel of coal. The following have exceeded the average:—

Mines.	Engines.	Length of stroke	Load in pounds.	Load per sq. inch. on pist.	Strokes per min.	Consump. of coal in bus.	Million lbs. lifted 1 foot by consump. of 1 bush. coal	Average quantity of water per min.
Wh. Prosper..	Western, 80-in.	9·7	94,964	15·0	8·2	3288	56·1	} 1301
Ditto	Roberts's 70-in.	9·75	16,294	16·1	5·3	2376	57·0	}
Great Work	Leeds's 60-inch	9·0	47,020	12·9	8·5	1895	60·0	202
North Roskear	New 70-inch.	10·0	59,159	12·2	4·6	1560	57·6	224
East W. Crofty	Trevenson's 80	10·32	84,779	12·6	3·5	1708	55·0	196
Poldice	Sims's 85-in.	10·0	75,465	9·8	8·7	3016	66·3	583
Ting-Tang	{ Sims's 60,160 in. combined }	9·0	86,400	15·6	4·9	1596	60·0	317
United Mines	Taylor's 85-in.	11·0	91,108	15·5	6·4	2036	55·9	—
Ditto	Cardoza's 90-in.	9·0	90,468	13·7	7·1	3849	56·7	—
Ditto	Eldon's 30-inch	9·0	13,631	16·0	8·2	556	61·0	—
Ditto	Hocking's 85-in	10·0	100,356	14·6	6·7	4111	55·6	—
East Wh. Rose	Penrose's 70 in.	10·0	51,228	11·5	3·6	882	56·5	} 190
Ditto	Michell's 70 in.	10·0	55,911	13·0	4·7	1090	67·9	}

KYMER AND LEIGHTON'S PATENT.—This was originally contrived for burning anthracite, or stone coal; it has proved, however, the most perfect system of combustion as yet proposed. It is found applicable to the use of any fuel, and to all manufacturing operations conducted in what are termed reverberatory furnaces, for calcining in kilns, the manufacture of glass, and various other purposes. It will e found of great advantage in all works where the escape of gases has hitherto been considered a nuisance, such as the smelting of copper and lead, and in alkali works; by its use such gases may be driven into flues and chambers for more condensation, or to form new combinations. The following extracts from the *Mining Journal* will explain the principles of this invention:—

ON HEAT AND COMBUSTION.

SIR,—Upon former occasions, some time ago, I used to take up a little space in the columns of your valuable Journal, with my speculations upon heat and combustion, more particularly as connected with a patent I had an interest in. I trust the explanations I am about to give, will prove a sufficient apology for returning at this time to the subject. The consideration of combustion with its desired result, heat, and economy of fuel, must always be interesting. Many of your present readers would not see the Journal at the time to which I refer—it is now many years since, and the older readers may not call to remembrance the principles I used to advocate; I will, therefore, briefly recapitulate them, remarking here that, from my own experience, which has since been very extensive, and the sanction of some of the highest authorities in the kingdom, everything has tended to confirm their correctness. In the ordinary mode of effecting combustion, nearly one-half of fuel is consumed without effect. Combustion ought to be divided into two classes—one fixed or local; the other, gaseous or diffused. In the former, heat is produced by the combustion of the solid part of fuel, or carbon; and it affects bodies only in actual contact, or very close proximity. The uses of this class of combustion and heat are limited—being confined for the most part to smelting or remelting metals in furnaces and cupolas. In the latter class, heat is the result of the combustion of gas, either previously existing in the fuel, or the result of the combustion of the solid part. In combustion, carbon and oxygen unite in two separate proportions, forming either carbonic acid or carbonic oxide. The latter is a combustible gas, and requires as much more oxygen to convert it into carbonic acid, as the carbon took up to form carbonic oxide. As the acid, carbon is fully saturated with oxygen, and in that case the greatest production of heat has been attained. Bituminous coal contains gas (carburretted hydrogen), and tar. Smoke and soot are those, having very fine minute particles of carbon in combination, which escape combustion for want of a supply of oxygen to consume them, and is so much waste of the most valuable part of the fuel. This is sufficiently apparent, and, at the same time, justly complained of as a great nuisance; but in the use of fuel, containing no volatile matter in the form of gas and tar—as charcoal, coke, or anthracite coal—although there may be no visible sign of any waste of fuel, still, passing off as carbonic oxide, one-half of the fuel is wasted for want of a second supply of oxygen. For a perfect result, both classes of combustion require to be separately supplied with their full proportion of oxygen or fresh air. Upon the application of air to the gaseous part of fuel, many able and admirably-written articles have appeared in the *Mining Journal*, more particularly from your talented correspondent, Mr. Charles Wye Williams. Combustion, to produce gaseous or diffused heat, is of most general use, and comprises many of the most important applications of fuel. When combustion depends solely upon the draught of a chimney, it is next to impossible to furnish the gaseous products with their full supply of air; because, while the fire opposes resistance to the free passage of the air, if another aperture without resistance be opened for it, the bulk will rush in that way, and the active combustion of the solid part of the fuel in the fire will fall off, rendering the whole inefficient. The use of a blast is the only means of effecting perfect and total combustion; the use of a blast is impracticable with common fire-grates—they are quickly destroyed. Some years ago, I ascertained that large quantities of anthracite coal, of very pure quality, some containing 92 or 93 per cent. of carbon, existed in the counties of Carmarthen and Glamorgan. I then conceived the idea, that the application of steam to this coal, when fully ignited, would produce all the effects of bituminous coal; that it would prove very valuable for the purposes of steam navigation, more especially for long voyages, since it might be regarded as concentrated fuel; and I contrived a grate, which is the subject of the patent, to which I have alluded above. In order that the elements of water may combine with carbon, it is necessary that the carbon be kept in a very active state of combustion, and in the form of anthracite coal—more particularly, I found the use of a blast necessary to effect this. To enable me to use a blast, and, at the same time, to apply the heat of the grate-bar to the generation of steam, so that the steam should pass with the blast through the highly-ignited carbon, I contrived the grate in question. Under these circumstances, both the elements of water, oxygen, and hydrogen, combine with the ignited carbon, and produce the two combustible gases—carbonic oxide, and carburetted hydrogen. These passing off from the fire, and meeting with sufficient oxygen, or fresh air, to consume them, occasion gaseous or diffused heat in proportion to the rapidity with which the action is carried on; and this may be regulated to the greatest nicety by increasing or diminishing the blast, which is easily effected by means of valves. I had an interview with Dr. Faraday, at the Royal Institution some years since, for the purpose of explaining to him these opinions, in which he fully concurred. He seemed at that time to take a great interest in the subject, and put several questions to me. He asked if I considered that we gained heat by the application of water? I answered, no; but that I considered we altered the effect of the heat; that, instead of all the heat being in the fire itself, we diffused it over a wide space. He was curious about the appearance of the flame we produced; I described it as a thin, transparent flame of a greenish yellow colour, when he remarked, "I have no doubt a much hotter flame than a more luminous flame."

ON HEAT AND COMBUSTION.

SIR,—I addressed a few remarks to you on the subject of combustion and heat, which you were good enough to publish in the Journal of the 10th inst. I take the liberty of sending at this time a few observations upon a peculiarity attending the use of the water grate, referred to in my letter of the 5th inst.; I candidly confess that I neither contemplated nor foresaw at the time I contrived the grate this peculiarity, upon which, in a great measure, depends that complete and total consumption of fuel which we have been enabled to attain. The pieces of fuel resting immediately upon the grate-bars do not burn away, in consequence of the coolness of the bars, and the direct action of the vapour of water—they thus form a bed for the highly-ignited fuel above, retaining the small pieces until they burn entirely away, or are reduced to minute particles of incombustible earthy matter. When the coal contains much impurity, and pyrites present, clinker forms in the fire, but it never sets upon the grate, unless the supply of water should be neglected. No ash ever falls into the ash-pit but when the fire is stirred, which it is necessary to do occasionally to clear it. With common fire-grates the principal combustion is going on at the lowest part of the fire; and as the pieces of fuel become reduced in size, so as to pass through the spaces between the bars, they fall into the ash-pit, and much fuel is thus lost. With the worst coal which I have ever used, once in six hours is sufficient for stirring to clear the fire, when the small particles of ash fall into the ash-pit, and the clinker requires to be raked out by the fire-door. I have used coal (anthracite) so pure, that it was necessary to clear the fire only once in three days. As it will prove the justness of my remark that such coals should be regarded as a concentrated fuel, I will intrude a little upon your space to give a few particulars, which I have no doubt will be interesting to a portion of your readers. I had burnt 5 tons of coal in London, shipped at Llanelly, from a colliery situated at the head of the Amman Valley, where the counties of Carmarthen and Glamorgan meet. Some short time after the proprietor was in London, arranging for the disposal of the property, and he wrote me, then in Lancashire, for my opinion of the coals, which I gave him. After this he sent me an analysis of the coal; and, as I happen to have his letter by me at this moment, I send a copy—the name, date, &c., may be satisfactory.

"Gerard's Hall Hotel, Basing-lane, London, March 12, 1845.

SIR,—I received yours of the 4th instant on Monday morning, for which I am much obliged. I beg to give you the result of an analysis of the coal, by R. Phillips, Esq.:—Carbon, 90·83; hydrogen, 3·38; nitrogen, ·96; oxygen, 2·33; silica-alumina, with traces of pyrites and common salt, 1·18; moisture, 1·32—100. I shall feel obliged by your giving an opinion of the above. Mr. Phillips reports it the very best he has ever tried. I have been obliged to send for a piece of it for Sir Henry De le Beche, for the Museum.

To Mr. Leighton, Messrs. Schneider and Co., Ulverston. J. JONES."

By adding 9-10ths of the moisture in the above to the carbon, we have upwards of 92 per cent. I have known specimens analysed, which have yielded between 95 and 96 per cent. of carbon. This coal is peculiarly adapted to steam navigation—it bears transport without injury—the weather does not affect it—and it will never ignite spontaneously. The pyrites of anthracite coal undergo no decomposition from the action of the weather, warmth, or moisture. Lumps are lying about old colliery workings unaltered, some of which have been there for a century. It has always appeared to me, that a blast must answer much better on board a steamer in rough and stormy weather, than the draught of the funnel. When the vessel is rolling, or pitching much, the latter must be very variable and unsteady—the former will be always certain. By the use of a blast, the size of the funnel may be very much reduced; it will then be necessary only to carry off the heated gases, the products of combustion, so that the people on deck are not annoyed by them. This will ease a vessel very much, both of the strain of such a heavy mass in rolling, and its resistance to the vessel's way in a strong head wind. These funnels in large steamers, are of great size. I recollect walking through part of the *Penelope's* funnel upon right with my hat on—it was upwards of 7 ft. diameter. To give some idea of the saving in bulk which would attend the use of anthracite coal, I may state, that while in London, I determined, by careful trials, that, to perform a certain amount of work, with common fire-places, 7½ tons of good Newcastle steam-coal were used; and to do the same work with the patent grate, 4 tons only of anthracite were used—a saving of nearly one-half, or 7-15ths. I always anticipated much difficulty in its introduction into steam-vessels; because, until its practicability had been most fully and satisfactorily demonstrated, it was not likely that a steamer would be sent to sea with so great a novelty: but, in the iron-works located in the anthracite district, I certainly did not look for any opposition—I expected the plan would be hailed as a boon.

T. H. LEIGHTON.

Llandebie, April 17.

STEAM NAVIGATION—IMPORTANT SUGGESTION.

SIR,—Upon reading over Mr. Leighton's letter, in your Journal of last week, I was struck by his remark, that a blast, for keeping up the steam on board steamers, would be more certain than the varying and unsteady action of a funnel in rough weather. I beg leave, through the medium of your columns, to offer a suggestion to that gentleman upon this subject, which seems to interest him so deeply. A number of first-class steamers (amongst the rest the *Great Britain*), have been lost within a few years, and in each case the cause of the disaster was the vessel being out of her computed course. May not this have arisen from the circumstances to which Mr. Leighton alludes—the varying and unsteady action of the draught—in consequence of which, the engines had not been performing their estimated work? I think Mr. Leighton would do well to institute inquiries into the circumstances of some of these cases.

H. COX.

Battersea, April 30.

Further particulars, with terms for license, may be had from Charles Rivington, Esq., No. 1, Fenchurch-buildings, London; or of Your obedient servant,

Cross Inn, Llandebie, near Llandillo. T. H. LEIGHTON.

STEAM COAL—WITHOUT SMOKE, as per experiments made at her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.)

OFFICES—2, MOORGATE-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use is. each, but to customers gratis.

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

Also, to avoid trouble, POST-OFFICE ORDERS should always be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.

"R. W." (Brighton).—We shall be happy to publish a full description of the invention, with the necessary engravings—and at as early a time as the necessary particulars can be furnished.

UNIVERSAL SALVAGE COMPANY.—We have had a variety of documents submitted to us in reference to the proceedings of certain parties connected with this company. The late hour at which our attention was directed to the subject, prevents further than this brief notice; but the whole matter shall receive our best and scrutinizing attention.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, JULY 24, 1847.

In the session of Parliament now closed, it appears that 189 bills have received the Royal Assent, for the construction of 1394 miles of railway.

The latest accounts from the United States and Russia, refer to extensive undertakings being contemplated in the construction of railways in these countries, consequent upon the inadequate communication between the interior and the shipping ports.

The extensive requirements at home—which may more prominently develope themselves after the harvest is ascertained—added to the prospect of an increased foreign demand for iron, are favourable indications of a more prosperous state of things, than has existed during the high price of food in the winter and spring months. If the grain and vegetable crops be satisfactory, the upward tendency of iron will be progressive, as contracts appear for the numerous railways getting into a state to require, for all purposes, equal to about 800 tons of pig-iron per mile, before they can be available for the public accommodation.

In another column will be found a report of the proceedings at the annual general meeting of the UNION BANK OF AUSTRALIA, which will be read with much satisfaction, not only by those who are more immediately interested in the success of this establishment, but by all who have watched with pleasure the progress and improvement of these our antipodean colonies. It will be seen that the profit for the year ending at the branches, 31st Dec., 1846, and in London, June 30th, 1847, was 57,037*l.* 10s. 3d.—being an increase of 1000*l.* over the previous year. The whole of the really bad and hopeless debts have been written off the colonial books, and debited to the London office; and the balance of the doubtful debt account has been reduced to 11,708*l.* 16s. 7d. This prosperous state of the bank may be mainly attributed to the success in the Australian colonies; from the directors' report, it appears that they are in a state of gradual and progressive improvement, and the settlers in general advancing in wealth and comfort. These are important and national facts, as the existence of such internal evidence of the capabilities of these fertile regions will induce numbers of the superabundant population of this over-peopled isle to try their fortunes where, by the exercise of industry and perseverance, plenty and independence await them—while they are protected by the same maternal laws which rule under the Government at home.

At a moment, like the present, when a great public trust is on the eve of reverting to the constituencies, one and all, of the United Kingdom, it cannot be unseasonable to address a word or two to those portions of the electoral body to which this Journal has long enjoyed the advantage of an immediate access, and chiefly among them to the electors of the county of Cornwall. It should be carefully kept in mind, by those who are about to exercise their privilege as Parliamentary electors, that it ought to be used not only with a view to the furtherance of their own opinions and interests, but with a view also to those of their unenfranchised brethren. The electoral right in the towns, not taking a broader basis, nor descending lower than an annual holding of 10*l.*, shuts out in every county tens of thousands from all direct participation in what, at common law, is their undoubted and indisputable right; but the statute has taken it from them, contemplating their benefit in the right as exercised by the class next above them. They are, therefore, in contemplation of law, voting through those to whom is individually confided the franchise; and without this indirect connection with the right, their destitution, in a large sense, is absolute.

"No foot of land do they possess,
No cottage in the wilderness."

So that if uncovered and unenclosed by the electoral tents of their neighbours, they are, through a life-long drudgery, without any political shelter whatever. With respect to the considerations which should guide the constituencies in their choice of representatives, we have little to say—believing Cornwall to be, upon the whole, a well-represented county; and as to the four present knights of the shire, particularly, we doubt whether any change as to them would be a benefit. They are men of high character, experience, and respectability, and have a great stake in the well-doing of the county they represent; and for that reason, with one exception, we think that the retirement of either of the four county Members would be a public loss. In the next session, the attempt will be renewed to remove the duty on foreign ores; and it requires neither discrimination nor prescience, beyond the common mark, to see that the next year's attempt promises to be fruitful of full success. As soon as 50,000*l.* can be conveniently spared from the public revenue, the CHANCELLOR has virtually conceded the remission of these duties; for which reason, if the great mining proprietors of Cornwall are still of opinion, that protection to native ores is necessary, it is essential that they find men who will exert themselves, and vote to that end—for the protecting animus of the present Members is (it is said) like the courage of ACRES, daily oozing away at their finger's end. Whatever view may be taken by the mining interest of this subject, we are quite sure that the county elections should be conducted with a view to it—for it concerns, and vitally concerns, the one great working business of the county. Whatever it may be best to do as to this point, the county, we are happy to say, is able to do; for, as a whole, the constituencies of Cornwall are free, with the exception of Launceston, whose franchise continues to be the pocket property of the PERCIES; there is not a purely nomination borough in the county. There are nominally resident electors, and periodical elections, holden even at Launceston; but the election proceeds there as it might have proceeded at Rome, when for Consul they elected the "consul's horse." This, however, is an instance exceptionable and extraordinary in the county—the large rule stretches out in the other direction, leaving the constituencies perfectly free as to who shall represent them.

If the continuance of the duties on foreign ores is felt to be a *sine qua non*, as to the profitable working of our home mines, we think the owners of mining property will scarcely be dealing fairly with themselves, or their successors, if they do not, by all practical means, and through their representatives in Parliament, enforce the necessity of their continuance—our opinion still being, that nothing but the straightened circumstances of the Imperial Treasury will give them a twelvemonth's life longer. A plenteous harvest, which innumerable tokens, both in heaven and earth, are richly overshadowing, and these duties will be thrown over into the circle of dead laws.

There are other county questions, such as the *enlargement* of the *Fisheries* on the Cornish coast; the Health of Towns, which means their *larger supply of water* and their *better drainage*—elements of health and cleanliness too long and lamentably neglected; and a better county railway—better, that is in the direction of the line, and in the speed obtainable upon it—by which the port of Falmouth would have the chance of again becoming the foreign mail port of the kingdom. These leading points, so mainly affecting the material prosperity of the district, deserve, and, we hope, will obtain from the electors of Cornwall, a just and full consideration. Living, as we have the happiness to do, in quiet times, and beneath the sovereignty of a youthful Queen, the probability is that the next, like the present Parliament, will expire by natural process. If so, thousands of those who assemble at the polling booths during the impending election, will go there for the very last time—they will exercise the right no more, if the next, in the literal sense of the statute, should be a septennial Parliament. In their behalf, we hope that the great public trust, which is committed to them, will in this last instance be exercised—not for objects private and personal, but with views of public utility—in such a manner, in fact, as may challenge just judgment of present, and deserve praises of future, times.

The dreadful explosion at Messrs. HALL'S gun-cotton manufactory, with its awfully destructive consequences, both to human life and property, as detailed in another column, call for a passing remark on the properties of this highly-dangerous compound. Without any practical knowledge ourselves of its manufacture, we may justly, in the first instance, remark, that much difference of opinion exists among operative chemists as to the precise degree of temperature at which the gun-cotton will explode—in some instances it having been known to fire at little more than blood heat; in others, not before the thermometer has reached 350°, or even 400°. It was given in evidence at the inquest, by those who had had considerable experience, that the drying stoves would have been considered safe at even 180° or 200° Fah., although one was never suffered to exceed 120°, and the other 110°; and yet from the total absence of fire in any shape, and the caution observed in allowing nothing to enter which could produce combustion—such as metal buttons, nailed shoes, &c.—it may fairly be surmised that the accident arose from what may be termed spontaneous combustion. This extraordinary difference in the exploding point of heat, may arise from various circumstances—the strength and quality of the acids employed, the nature of the cotton itself, or even the electrical condition of the atmosphere, may have considerable effect on so delicate a compound. Whatever may be the cause, it is evident that those most experienced in its manufacture, can have no real confidence in its safety under any circumstances; and as it cannot be expected that a compound now evidently becoming of such vast utility in blasting operations, and probably, in future, applicable to many other useful purposes, should be lost, from fear of danger in its manufacture, it becomes highly desirable that a series of carefully-conducted experiments, on a scale sufficiently small to be quite free from dangerous results, should be entered into, with a view to ascertain a mode of manipulation, by which a cotton could be produced that might confidently be relied on not to explode below a certain point of temperature, and which, by being in the last stage of the drying process, separated into small portions, as much as possible isolated from each other, would be safe in the manufacture. To the patentees and manufacturers, as well as to the public at large, the subject has become a really important one; and we doubt not such steps will be taken by the parties more immediately interested, as to effectually guard against the recurrence of so frightful a calamity, and enable themselves to proceed in the manufacture with perfect confidence. It is evident, at present, there is much to learn respecting the nature and properties of this explosive compound.

PRODUCE OF COPPER IN SOUTH AUSTRALIA.—In the *Adelaide Observer* of the 30th January last, are some remarks on the apprehensions which have been entertained in England, that the superabundance of rich copper ore produced in South Australia would have a seriously injurious effect on the price of the pure metal. They very justly remark, that the demand for copper is a rapidly increasing one, and that the requirements for naval, engineering, and commercial purposes being greatly beyond all former precedent, and its abundance rendering it applicable to many new purposes, there is not the slightest grounds for any such apprehension.

LETTERS PATENT FOR INVENTIONS HOME AND FOREIGN.—The regulations attending the taking out letters patent being generally but imperfectly known, both in this country and abroad, we have gleaned together the following particulars:—In this country, any person, native or foreigner, may obtain letters patent; but in the case of a foreigner living abroad, the patent must be taken out on his behalf by some person resident within the United Kingdom, as "a communication from a foreigner residing abroad." No British subject can patent in his name an invention which is the communication of another British subject, unless the inventor is abroad or deceased. For England, Scotland, and Ireland, separate patents are required. The term for which a patent is granted is 14 years. The average cost—England, 110*l.*; Scotland, 75*l.*; Ireland, 135*l.*; if two names, there is an extra expense of about 17*l.* 10s., and for every additional name 12*l.* When two parties appear to have hit on the same invention independently, it is the practice either to allow a patent to neither, or, if the parties can arrange matters between themselves, to allow a patent to be taken out in their joint names, or for their joint benefit. The cost of entering a caveat for England, Scotland, and Ireland, is one guinea per annum each. Patents may also be obtained in most of the European states, but they should not be applied for until the one for England has been secured. In taking out a patent in the United States, the party has the exclusive right of doing so for six months after making his invention public in England. The following is the average cost of foreign patents:—Austria and Italian States, 1 to 15 years—5 years, 25*l.*; 10 years, 45*l.*; 15 years, 75*l.* Bavaria, from 2 to 15 years—5 years, 12*l.*; 10 years, 15*l.*; 15 years, 20*l.* In Belgium and Holland, patents may be secured without any tax for 2 years—thus giving ample time to prove the invention. If successful, the terms are then—5 years, 23*l.*; 10 years, 37*l.*; 15 years, 50*l.* If after the 2 years he abandons it, there is no further tax or liability. By the new law in France, which came into operation Oct. 8, 1844, a patent may be obtained in that country for 15 years, for 4*l.* per annum, which may be discontinued at any time; if for 5 years certain, 34*l.*; 10 years, 37*l.*; 15 years, 70*l.* Prussia, 5, 8, or 8 years, 15*l.* Russia, 1 to 6 years, 20*l.* to 80*l.* Spain, 5 years, 50*l.* United States, 14 years, 120*l.*

PATENT KAMPTULICON.—We are glad to learn, that at length this material is about being applied to an important purpose, to which it is peculiarly adapted—that of preventing vibration on railways. The Eastern Counties Railway, we are informed, have given an order for an extensive supply, to use in the construction of their iron bridges and other works,—and in which they will doubtless, be followed by other companies, as its introduction between joints will not only effect elasticity, but greatly preserve the other materials employed.

MINING ENGINEERS—MINING OPERATIONS IN THE UNITED STATES.—At the last meeting of the Association of American Geologists and Naturalists, Dr. Jackson read an essay on this subject, in which an account of mining operations, as they are carried on in America, was given, and the reason why they so rarely succeeded well is, that they who own mines are in too great haste; they speculate in the stock without knowing the true value of their mines, and this they do rather than work. The author stated, that this is not a picture of fancy, but, on the contrary, it is the result of nearly all American mining operations. A good mining engineer possesses the following qualities:—1. He must be a good geologist. 2. He must be a good mineralogist. 3. He should be a good analytical chemist. 4. He should know the history of mining in other countries besides his own. Lastly, he should be able to direct well a gang of men. The following is the state in which the metals and ores of America are found:—*Gold* nearly pure: the author explained the different methods of washing and separating the metal in the United States and in Brazil; and that the greatest gold deposit in the world is in the eastern slope of the Oural Mountains.—*Silver* in the pure or native state is found in many places, but more generally in combination, as with copper, lead, zinc, &c. Native silver and native copper are occasionally found in the same specimen; such is the case with the metals as they occur in the Lake Superior copper.—*Native Copper* occurs in the igneous rocks, as the basalt, the greenstone, amygdaloid, &c.—*Tin* has not yet been found in quantities which justify the attempt at working it in the United States: the only known localities are in New Hampshire.—*Lead* as an ore is next in value to copper; it is generally found in combination with sulphur, constituting the galena or sulphuret of lead. In the Western States the lead is nearly a pure sulphuret, but often contains a little silver, sometimes amounting to ½ per cent; 5 to 7 lbs. of silver have occasionally been obtained from a ton of lead ore.—*Eureka*: a new and highly-interesting American periodical.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

The prosecution of Teste, the former Minister of Public Works, for having accepted a bribe of 95,000 fr., for the concession of the mines of Gouhenans, has terminated by his condemnation, to restore the bribe, to pay a fine of equal amount, to be imprisoned for three years, and to be deprived of all his civil rights, and of the rights of citizenship. General Cubières and M. Parmentier, the directors of the mining company who gave the bribe, are condemned to 10,000 fr. fine, and to civil degradation.

A journal has published a series of grave insinuations against Marshal Soult, the President of the Council, and, as such, nominal Prime Minister of France. These insinuations are, that he makes part of an association which has been formed, and still exists, for obtaining possession of all the concessions of mines in Algeria; and even that he has accepted shares in certain mining companies of Africa, for using his all-powerful influence in obtaining their concessions. In repeating these insinuations, I need scarcely say that I do not take on myself the responsibility of declaring that they are true. As regards the association, however, the journal referred to has published the *acte*, or deed, by which several persons, and at their head the great ironmaster, M. Talabot, unite themselves into a company, of which the object is declared to be—"1. To possess in common the concessions already made to some of them.—2. To make all efforts, and to take all proceedings necessary, for bringing to the best result possible the demands in concession already formed by others of them.—3. To take all measures for working, &c., the properties of the company.—4. To add and possess in common, and work, all other concessions which may be added to the company.—5. To prepare the constitution of a public company under such form as may be considered most desirable." This company, it is clear, is nothing less than a gigantic monopoly, which is intended, not only to absorb all the concessions of mines in Algiers already made, but to drive competitors for other concessions out of the field. Among the clauses in its bye-laws is one setting forth that a certain number of shares are to be reserved, "to be distributed to friends of the company, who may aid it by their exertions and influence," which, it is pretty clear, means corruption, if it means anything. The deed contains a list of the concessions obtained, or demanded, by the parties who sign it, which is not without interest, as showing the extent to which concessions of mines in Algeria have been made, or were about to be made, and yet this list does not include *all*:—"M. Jules Talabot possesses the concession of an iron mine called Ain Morka, or Mokla-el-Haclid, in the environs of Bona, and a right to a large quantity of wood annually; M. Peron possesses the right to work an iron mine called Bouhama; M. Girard the right to work an iron mine called Carezas; M. Perret the right to work an iron mine situated on the bank of the Lake Tzara (Bona); Count de Noue, and others, the right to work an iron mine in the mountains of Felfetol; Count Clary an iron mine at Cape Ferrot, in the province of Oran; M. Perier a demand to work an iron deposit to the north-east of the concession of M. Talabot; M. Imbault a demand to work an iron mine to the west of the same concession; M. de Candrans a demand to work an iron mine to the east of the same concession; M. Puget a demand to work a deposit of antimony in the plain of Bou Etinon, to the south of Constantine; M. Chavitesu and Gai a demand to work a deposit of copper at Ain Barbar; Baron Clary a demand to work a deposit of iron at the distance of 2 kilometres from Algiers." In addition to all these individuals, a number of others who possess, or are likely to possess, concessions of forests, lands, &c., are associated with them.

In a few weeks the mining campaign, if it may be so called, will commence; and, from the preparations which are making for it, it appears that it will be the most important ever witnessed in this country. Everything, in fact, betokens a disposition to embark in mining speculations; and it is the opinion of many well-informed persons, that the same ardour will be manifested with respect to mines, as was shown a year or two ago with respect to railways. Among the multitude of schemes that will be brought forward, will be many excellently good, many exceedingly bad, and many concocted by downright swindlers, merely to gull the public. The difficulty to the English capitalist will be to distinguish the good from the bad—the roguish from the honest. The Parisian correspondence of the *Mining Journal* will aid him as much as possible; but, in many cases, it will be impossible to give all details that might be required. I think, therefore, that some one of the respectable mining agencies, which I see advertised in your columns, would do well to turn its serious attention to the mining matters of this country, so as to be enabled to give full explanations as to the real value of the different enterprises that will, in the course of a few months, puff off their respective merits in the advertising columns of the *Mining Journal*. I happen to know that the same desire will be felt to obtain the adjunction of English capital in mining speculations, as was shown to catch it at the time of the railway fever. As in the railways, some of these speculations will afford most magnificent returns for the capital invested, and it would be a pity that they should be slighted, because some of the schemes brought forward may happen to be worthless, or worse than worthless.

The Railway du Centre was on Monday opened as far as Bruges; it is of considerable importance to the iron and other metallurgical establishments, in the neighbourhood of Vierzon.

Experiments have recently been made at Nantes, with respect to the mixing of coal-tar with any vegetable substance, and it has been proved that a remarkably fine gas may be obtained from it. The vegetable substances best adapted to this purpose are—dried turf, and especially turf so dry as to fall in dust, saw-dust, the dust of vegetable coal, &c. The discovery may not be new in England, but in this country it is novel, and is thought of considerable importance both to coal-pits and gas manufactories.

A general meeting of the shareholders of the Mines of St. Mandé will be held on the 6th of August.

The rails on the St. Etienne to Lyons Railway have already been changed three times, and each time they have had to be increased in weight. They will shortly have to be changed again, when a new augmentation of weight will take place. Eventually, the rails on all the lines in this country will be carried to from 40 to 45 kils., which is said to be the present weight on the best railways in England. All this increasing of the weight is so much to the profits of the ironmasters.

I have several times referred to the fact of the practice of covering in houses with zinc, placed on iron rafters, beginning to be common in this country. A great number of houses are now building, and I notice that the greater part of them are being covered in that way. In several of them even the supporters of the floors are in iron. In fact, iron is now employed in a thousand ways in house building, which would never have been thought of a few years ago; and the use of iron bids fair to become more and more general every year. This fact is certainly remarkable; for it shows that, even in France, where iron is so enormously dear, it is still found to be, in the long run, a great deal cheaper than wood.

The little railway, from Dieppe to the Havre line, has already disbursed not less than 2,086,696 fr. (upwards of 83,600*l.*) for rails and chairs.

The Company of the Mines of Copper, Silver, and Lead of Geroinagny, has already sunk some shafts, and has discovered veins of copper, which there is every reason to believe is of considerable importance.—*Paris, Wednesday.*

BELGIUM.—A deplorable calamity has occurred at the coal-pits of Marihaye, in the commune of Seraing. A fire broke out in the buildings, and before an alarm could be given to the men in the pits, it had extended to the ladders and gear, which enable the men to descend, and even to the coal in the mine. Nevertheless, several of them contrived to escape, but a great number perished. The next morning, between 30 and 40 dead bodies were drawn from the pits, and there was every reason to believe that there were still more within it. The pecuniary loss to the company is immense, consisting of machinery, horses, buildings, &c., &c.

The profits of the Company of the Mines et Fonderies de Bleyberg, up to 31st December last, were 851,577 fr., which were divided as follows:—5 per cent. to the directors, 42,570 fr.; 2 per cent. to the commissaires, 17,028 fr.; 3 per cent to the *employés*, 25,542 fr.; 10 per cent. to the reserve fund, including an indivisible balance of 157 fr., 85,297 fr.; 80 per cent. dividends, or 75 fr. 68 c. per share, 681,120 fr.

The *Exposition de l'Industrie Nationale*, which is now open, is very creditable to the metallurgic industry of the country. Among other things, there are a goodly show of steam-engines, locomotives, &c., and of first-class railway carriages, *in sheet-iron.—Brussels, Tuesday.*

MINING IN AUSTRALIA.—We are informed, that two miners, employed at the Burra Burra Mines, *earned* 400*l.* *in six weeks*, at 30*s.* per ton. Some of the shareholders expressed dissatisfaction, and attributed neglect to the agents, or foul-play to the men, and the directors have been called upon to examine into the matter.

ELECTRICITY AS APPLIED TO THE SMELTING OF ORES.

We are given to understand, upon undoubted authority, that arrangements have been entered into for the purpose of fully testing the process lately patented by Mr. A. Wall, for refining and smelting ores by electricity, and that Dartmoor is to be the scene of operations—the Dartmoor Consols Mining Company having, for a limited period, placed the smelting-house, situate on their mine, at the disposal of the patentee. We have already made mention of this highly-important discovery in a former Number, and we congratulate the mining interest on the principle being so near development; and should the result of the experiments be favourable, which we predict it will be, there can be no doubt it will give an impetus to the trade, and a new era will be arrived at in the art of smelting. We understand the experiments hitherto made, have been on the harder metals—such as iron and steel—and which have been highly satisfactory. The object of the present experiments at Dartmoor is, to prove the great superiority of the electric process on the more ductile metals—such as tin, copper, lead, &c. We cannot, therefore, speak too highly of the liberality of the directors of the Dartmoor Consols Mine, in thus enabling the patentee to show the results in the very heart of the mining district, where these metals are chiefly produced, and which, we understand, he confidently anticipates will be yet more favourable than on the harder metals. Hitherto smelting the ores, raised in the two counties of Devon and Cornwall, has been a trade of itself—the ores being sold at or near the mine, and taken to Wales to be smelted; and this business being in the hands of a few very rich individuals, there is not that fair competition that there should be in a trade of such vast magnitude.

To obviate this great evil, which weighs heavily upon those who have a vested interest in mines, as well as on the miner who extracts the ore, has been the anxious desire of many patriotic individuals; but the monopoly has taken too deep a root to be easily removed, and, we lament to say, is still exists in full vigour. By the new process, smelting will be carried on at a much less cost; and we confidently anticipate that furnaces will be erected in localities where the ores are produced, and smelted on the spot, instead of being conveyed at a considerable charge for carriage, freight, &c., as now practised—thus enabling the industrious miner, and the capitalist who invests in mines, to divide a handsome profit, which is now swallowed up by the monopolist; and many mines that are worked at a loss, will return dividends to the shareholders. We hear that a large offer has been made to the patentee by a private capitalist, for the exclusive right of using his patent in the two counties of Devon and Cornwall; but he rejected the offer, preferring to allow those locally interested to share the benefits to be derived from his discoveries.

COPPER AND LEAD FROM AUSTRALIA.

The following are particulars of the exports from the several mining establishments in South Australia during the year 1846:—

Mines.	*Tons*	*cwts.*	*qrs.*	*lbs.*
Burra Burra	4564	3	1	26
Bagot	1386	18	1	14
Montacute	503	0	0	0
South Australian Company	599	0	0	0
Paringa	97	19	0	0
Princess Royal	121	9	3	0
Australian Mining Company	1	5	3	0
LEAD	70	19	3	0
	7378	16	0	12
Add 5 per cent.	363	18	1	17
Total quantity shipped, in tons of 21 cwts.	7642	4	2	1

The Electric Telegraph.

Most wond'rous specimen of art,
With Nature's laws combined—
Thou actest an enchanter's part,
Unrivalled in its kind.

United, at a moment's date,
Two distant spots we see;
Whilst time and space, annihilate,
Are set at nought by thee!

The fabled wonders, which of old
Our childhood loved to read,
Have scarcely equal wonders told,
To match thy lightning speed.

The waive of the magician's wand,
Bad distant scenes appear;
Whilst far-off lands, at thy command,
Obediently hear.

O'er miles and miles the message flies;
Yet scarcely is it said,
When, lo! the listener replies
Before a moment's fled.

When shall thy new-found influence cease?
How far will it extend?
Shall not its curious power's increase
Remotest nations blend?

Yet enemies thou need'st must find—
True merit raises spite;
Then, think of all the foes combined,
With which thou'lt have to fight.

Ambassadors, who'll be sent back
From every foreign nation,
With secretaries at their back,
All dying of vexation.

The Post-office destroyed will be;
For, where's the use of writing—
When back the answer comes by thee,
Whilst queries we're inditing?

Let's have a talk, then, quite at ease,
And gossip while we may;
Let's chat awhile with the Chinese,
And jest with Paraguay.

We'll ask a riddle in Peru,
Tell tales at Ispahan—
Just speak a word in Timbuctoo,
And whisper with Japan.

As round the world thy influence rolls,
For one, I shall not wonder,
To find, through thee, the very Poles
Cannot be kept asunder.

PROGRESS OF MINING IN FRANCE.—The railway mania has now subsided in France—the steam has evaporated, and the boiler burst, burning no few of the dabblers at the Bourse. This change may be chiefly accounted for in consequence of the extorting monopoly of the iron and forgemasters, and the pertinacity of the Minister of Commerce to exact the enormous import duties on British iron and machinery (next to prohibition), notwithstanding the strong feeling in the Chamber of Deputies for its reduction. It is a well-known fact, that more than one-half of the projected, or conceded, lines are in a paralysed state—at a discount—the companies fearing to proceed with them; whilst others, which might be actually progressing, are at a stand still for want of the necessary materials, rails, &c., or cannot carry on their works at the high rates imposed upon them by the iron and machinery monopolists. How this state of things will end is difficult to say, as a most serious crisis is approaching in the railway settlements. Whilst this panic exists in railway speculations, mining enterprise is in the meantime making a rapid progress. As we have already stated, that the Government for the last few years had appointed experienced engineers and scientific geologists and mineralogists to explore, or, more properly speaking, *analyse* the mineral and metallic resources of the different departments throughout France, they have succeeded in discovering some valuable beds of iron, and other ores, coal, &c., which has given an impetus to monied parties to embark their capital in the working of those hidden treasures which will ultimately fully return a good interest on the investments, and, at the same time, open a wide field to the industrious population, and annihilate the exclusive monopoly, which has too long existed in the hands of a few, to the great detriment of the public at large. The introduction of railways in France, has certainly been one of the greatest inducements to parties investing in mining adventures, by proving, that on the limited scale her mines have been, and are now, worked, she never can compete with England, Belgium, or Sweden, to meet the rapid demands that are making for iron, coal, and machinery of every description, unless the competition is extended to the many, instead of being confined to the few, who are favoured by the Ministerial patronage, or, more properly speaking, monopolising companies, which have been the greatest impediment to national industry. It appears, that a very extensive coal-field has recently been discovered in the vicinity of the city of Douai, bordering upon the Great Northern Trunk Line of railway from Paris, Amiens, Arras, Lille, Valenciennes, Mons, and Brussels. The coal is represented to be of an excellent quality; and, according to the opinions of experienced mining engineers and mineralogists, there is very little doubt that a connection exists between this seam of bitumen and the celebrated coal districts of Valenciennes and Mons. A concession has been applied for to Government for the working of it, which will be a most important advantage to that district, having the means by the railway of a cheap carriage to the capital and other parts. On the banks of the Rhine, Belgium, and Prussia, several French companies are formed to work these mineral riches, which are well known to exist—iron, zinc, lead, and even silver, coal, &c.—and have got concessions granted them by the authorities. Manual labour is obtained for a trifle, and land for little or nothing—so that there is every probability of a speedy and successful result.

TRANS-ATLANTIC STEAM NAVIGATION.—The epitaph on the monument erected to Capt. Roberts, the commander of the ill-fated steamer *President*, represents him as being the first who ever crossed the Atlantic in a steam-ship. This is an error; the steamer *Savannah*, Capt. Rogers, successfully crossed and recrossed the Atlantic in 1819, using steam the greater part of the voyage. It was nearly 20 years after this event that Capt. Roberts made his first voyage in a steam-ship to the United States.

THE SILVER AND GOLD MINES OF THE NEW WORLD.

SECOND PART.—ON THE FUTURE PROSPECTS OF THE MINES OF AMERICA, COMPARED WITH THOSE OF EUROPE.—NO. III.

It was the fine times of the mines of Potosi, and the weight of silver produced exceeded that of gold in the proportion of 60 to 1. Then came the fine times of the gold mines of Brazil, without any diminution taking place in the arrivals of silver. At the same period treasures were drawn from the silver deposits of Choco, of Antioquio, of Papayan. The commercial world received from America 1 kilogramme of gold for 30 kilogrammes of silver. The middle of the eighteenth century was thus passed. Then the mines of Mexico began to display their magnificence, and the relation was about 40 to 1. Brazil, however, began to decline whilst the mines of Mexico increased their production, and thus, at the beginning of the century, the quantity of silver extracted exceeded 57 times that of gold. At present the quantity of silver is less; we have returned almost to the relation of 40 to 1; but it is owing to a diminution, which it may be believed is temporary, in the extraction of silver. The chances are, that the production of silver will for the future be greater than that of gold, although it may be expected that New Grenada will increase its yield in gold.

It is thus that, since the discovery of America, gold has become relatively scarcer than silver. The scarcity would have been more marked if America alone had produced the precious metals, inasmuch as other producing countries have yielded a less proportion of silver. If the mass of silver produced by America has decreased since the commencement of the century, the decrease has been neither general nor equal everywhere. It is specially Mexico and Bolivia which have fallen off. As regards Mexico, part of the reduction may be ascribed to the mines themselves, which have not yielded, as at the beginning of the last century, heaps of great riches. Chili presents the largest increase. Situated within easy reach of the sea in all its parts, and wisely governed, this country prospers. The population labours in perfect security, instead of feeling, like Mexico, alarms—the infallible effect of which is to paralyse the spirit of enterprise. At Chili the people are laborious and hardy, and new mines are worked with zeal. Unfortunately, as in all the rest of Spanish and Portuguese America, the knowledge of the mechanical arts, and the knowledge of the simplest material means which are familiar to European industry, are not equal to the good intentions of the Government, nor to the spirit of order of the population. In these regions, as in the Spanish Peninsula, and in Turkey, the idea of the advantages of a road which carriages can traverse has not yet penetrated. M'Adam is a fabulous image, like any of the fabulous animals; the *arriero* with his mules is still the only idea the people have of effecting conveyances.

II. ON THE FUTURE PRODUCTION OF AMERICA.

Notwithstanding the uncertainty of all attempts to see into the future, let us endeavour to ascertain what it is possible to obtain in diminution of the cost of production of the precious metals of America, and particularly of silver. Let us speak of Mexico: what we shall say of it will be applicable to Peru, and to the centres of the production of silver, spread over the rest of the New Continent. Let us pass, then, in review, the divers matters employed in working silver ore. Let us see what reduction in price each of them may sustain, and if it would not be possible to reduce the consumption. Let us also say a word on the other different articles of expense, in order to indicate, as much as it is possible to do, in what proportion they may be modified.

The matters employed in the treatment of ore are, fuel excepted, salt, *magistral*, mercury. The other items of expense are the extraction from the bosom of the earth, and the mechanical preparations of the ores for fusion, or for amalgamation in the *patio*. For fusion a simple breakage is employed, which there is scarcely any need to modify. For the *patio* the ore must be pounded, put in flour, and triturated, and that is an operation which requires a great motive power. Then comes the amalgamation, which implies the treading by the feet of men, or of horses; then the washing, the compression of the amalgam, and the evaporation of the mercury.

In order to give a better idea of the importance of each article, and each operation in the production of silver, I here quote a calculation of M. Duport, who has had the idea to express in *grammes* of silver the different operations and the different consumptions which correspond, on an average, to a kilogramme of metal produced, conveyed to the seaport, and embarked:—1, salt and *magistral*, 61 grammes of silver; 2, mercury, 112; 3, trituration, 171; 4, working of the ore triturated, 72; 5, rent and management, 38; 6, Government dues, including coining, 145; 7, cost of melting, conveyance, and embarkation, 35; 8, remains for the extraction of ore, and for profit, 366—Total, equal to 1 kilogramme, 1000 grammes.

At Guanaxuato and at Zacatecas, which are in the centre of the country at an equal distance from the Pacific Ocean and from the Gulf of Mexico, at less than 300 kilometres from the inexhaustible reservoir of salt with which Nature has surrounded the continents, salt still costs, without including duty, from 40 to 50 fr. the 100 kilogrammes (1*l.* 12*s.* to 2*l.* the 200 lbs.). In Europe, salt on the banks of the sea is scarcely worth more than the cost of collecting it,* owing to the perfect means of extracting it; for raw salt, in salt marshes well managed, does not cost more than 30 c. the 100 kilogrammes.† Deducting the duty, the value of salt in France, on any point of the territory, exceeds by very little, supposing there be no monopoly, the cost of conveyance, which on our roads of France is 2 centimes the 100 kilogrammes per kilometre. At this rate 100 kilogrammes of salt, conveyed a distance of 300 kilometres, ought not to cost more than about 6 fr. In Mexico, at a little distance from the silver deposits, which are worked with the greatest activity, Nature has placed leagoons, especially that of Penon Blanco, the waters of which are salt, and which occupy ground on which everything indicates the existence of rock salt. If this locality were properly worked, the price of salt would be reduced two-thirds for the mines of Guanaxuato and Zacatecas, even in leaving the roads in the detestable state in which they now are. The reduction would be more than nine-tenths with good roads.

The establishment of good communications would also lessen in a great proportion the expense of *magistral*; for pyrites of copper are abundant in the country.‡ Still even if the cost of salt and *magistral* were reduced by two-thirds, or nine-tenths, the price of silver would only be affected to a trifling degree, because these two ingredients only represent at present 61 grammes of silver. A reduction of 50 grammes on these two articles, or five-sixths, which would be enormous, would only amount to 5 per cent. of the cost of production of a kilogramme of silver.

The expense of mercury is double that of *magistral* and salt together. This metal is only now worked on a grand scale for general commerce at two places, both in Europe—at Almaden in Spain, and at Idria in Carniola. The mines of Almaden are the richest, and, thank God! give no signs of being about to be exhausted; those of Idria are also at present in a state of great prosperity: but for the Mexican miners everything passes as if the mines of mercury were impoverished, and had increased their selling prices. Under the colonial system, the Crown of Spain reserved to itself the sale of the mercury of Almaden; it even purchased that of Idria, to resell it. At first it only gave mercury to the Mexican miners at a price which left it a large profit; but it gave it at the cost price to those of Peru. Mexico complained; whereupon, in 1777,§ the price was reduced from 980 fr. per 100 kilogrammes to 732 fr., and, subsequently, to 500 fr., delivered in Mexico.‖ Since the Independence, speculation has caused the article to become very dear, and it forms a monopoly in the hands of some powerful capitalists. Delivered at the mines, it now costs to the miners, according to the distance of the port, from 1550 to 1750 fr.¶ The Mexicans complain of this dearness, which prevents them at present from treating ores of a smaller yield than a *millième* of silver. Their statesmen say, not without reason, that Spain would draw more profit from her mines of Almaden, if she would negotiate with Mexico an advantageous treaty of commerce for her manufactures of Catalonia, and for the mines of the Peninsula, under the condition that mercury should be delivered to Mexican miners at the price existing under the colonial system. It is certain that the Government of the Peninsula possesses in its mines of mercury a means of action over its ancient colonies, of which it does not appear to suspect the importance.

[To be continued in next week's Mining Journal.]

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* Salt at Guanaxuato is worth 12 piastres per load of 138 kilogrammes; the piastre is equal in weight to 5 fr. 43 c.; and thus 100 kilogrammes cost 47 fr. 22 c.

† At present it may be said, without exaggeration, that it is not worth the trouble of collecting. On the banks of the Mediterranean, an establishment is being organised by M. Ballard, a learned chemist, for extracting sulphate of soda from the sea. Immense quantities of salt will have to be fabricated as an indispensable ingredient in the manufacture; but this salt will be abandoned, or thrown into the sea.

‡ Particularly at Tepezala. Generally speaking, it may be estimated that the *magistral* costs 45 to 90 fr. per 100 kilogrammes, delivered at the silver mines.

§ The cost price was 150 fr. per 100 kilogrammes at Seville, and 375 fr. at Mexico.

‖ This was the price of the mercury of Almaden; that of Idria was a little higher.

¶ In converting Spanish moneys into French, we calculate here, and everywhere, the piastre at its full value, 5 fr. 43 c., and not 5 fr., as is generally done. A piastre, like a piece of 1 fr., is a weight of silver; and this weight must be expressed as it is, without entering into the variations of its relative value in different countries.

Original Correspondence.

IMPROVEMENT IN SMELTING COPPER ORES.

Sir,—Rose determined by experiment that the only metallic sulphurets which are easily decomposed by hydrogen are those of antimony, bismuth, and silver. The sulphuret of tin is decomposed with difficulty, and requires a very high temperature. All the other sulphurets, which he subjected to this treatment, were either deprived of a part of their sulphur, as bisulphuret of iron, or were not attacked at all, as happened with the sulphurets of zinc, lead, and copper. Mr. Rodgers, of Pimlico, has also established, and made the basis of a patent, that the sulphurets of iron, zinc, copper, silver, &c., undergo decomposition when submitted to the action of protoxide of hydrogen in the form of steam. The metal in those sulphurets, which suffer reduction by the action of hydrogen gas, is left in the free state, and the sulphur evolved as sulphuretted hydrogen gas; and in those which undergo decomposition by the agency of steam, the metal is oxidised by the oxygen of the water—while its hydrogen combines with the sulphur, forming hydrosulphuric acid gas. By the action of hydrogen on metallic sulphurets, the affinity of hydrogen for sulphur determines the decomposition in the case of those which retain the sulphur with feeble affinity at an elevated temperature; but, by the action of steam, a double set of affinities being brought into play, the number which is capable of reduction is increased, a less elevated temperature is necessary for their decomposition, and the rapidity with which it is accomplished is considerably accelerated. The elements concerned in the reduction of metallic sulphurets by steam are—metal and sulphur, hydrogen and oxygen, which after decomposition present themselves as metal and oxygen (metallic oxide), and sulphur and hydrogen (sulphuretted hydrogen gas). If the operation is not conducted in a close vessel or retort, but in a reverberatory furnace, the air which has escaped combustion will determine in part the decomposition of the sulphuretted hydrogen gas with the production of sulphurous acid gas. These two gases, being mutually destructive to each other, will instantly combine and deposit their sulphur. Such being the action of steam on metallic sulphurets, I am at a loss to understand how your correspondent, "Jupiter Ammon," can attribute to it the production of ammonia. Kuhlmann succeeded in converting the oxacids of nitrogen, mixed with free hydrogen, into ammonia, by the aid of spongy platinum. He was also enabled to produce it from other nitrogenised compounds by free hydrogen, and by carburetted hydrogen gases; but in no instance was he able to cause free nitrogen and free hydrogen to combine. Now, in your correspondent's assertion, that the action of steam on a metallic sulphuret will produce ammonia, and the only source from whence he could obtain his nitrogen being the atmosphere, which contains it in an uncombined state, and the authority of Kuhlmann on this point being so conclusive, as to warrant, unless it is strongly supported by facts, a decided negation.

Numerous have been the suggestions for remedying the nuisance arising from the copper smoke, and the smelters have been impressed with the necessity, that something ought to be done towards its abatement. The method they adopted, after a long examination of the subject, and after having had the opinion of scientific men on the composition and nature of the gases, and being at considerable expense, was simply the lengthening of the flues, by which the poisonous metallic vapours are so far cooled, as to be deposited; while the sulphur is allowed to escape, and pollute the atmosphere—they contenting themselves with the belief, that they had accomplished all that the emergencies of the case warranted. The failure of their investigation appears to have proceeded from their having adopted mechanical means, instead of employing chemical agency. If they were not so prejudiced to the present method of reducing the ore, which causes an immense quantity of fuel to be consumed, the adoption of a different method of calcination, by which the sulphur would be arrested, and with it the metallic vapours, would at once remedy the evil. From information I have obtained from Mr. Rodgers, I am convinced that, if the ore were subjected to calcination by steam, this long-sought desideratum would be attained, the nuisance abated, the amount of fuel required lessened, and the collection of the sulphur highly remunerative. The quantity of sulphur driven off from the furnaces of one of the first copper smelters at Swansea, as sulphurous acid gas, amounted, in 1821, to 45 tons weekly, which, by taking the low market price of 4*l.* 10s. per ton, as the price of sulphur, would amount to the sum of 202*l.* 10s., or, for the whole year, to upwards of 10,000*l.* This immense quantity, which is now allowed to escape into the atmosphere, might, by these means, be perfectly separated, and brought into a commercial state, which, from its important uses in the industrial arts, would find a ready market; while the total quantity from different copper-works, would render us nearly independent of foreign aid.—John Howson: *Cornhill, July* 22.

ON THE MANUFACTURE AND USE OF AMMONIA.

Sir,—Few of your readers may be aware of the value of sulphate of ammonia, or the various purposes to which ammonia may be applied, if produced at a cheap rate. I will, in as few words as possible, point out the objects I have in view while proposing the manufacture of sulphate of ammonia upon a large scale. By means of this salt, muriate of soda, or common salt, may be decomposed—the products of which will be sulphate of soda, and muriate of ammonia. At this time, large quantities of common salt are decomposed to prepare soda and alkali. Sulphuric acid is made by burning sulphur, receiving the fumes into leaden chambers, where, by the addition of nitrous gas and water, or steam, they condense into the liquid acid. Salt is then acted upon in an open air-furnace by this acid; muriatic acid gas is evolved, and sulphate of soda is thus obtained. The sulphate is afterwards treated in another furnace with carbonate of lime, or chalk, and small coal; the sulphate of soda, here parting with its oxygen, passes into the state of sulphuret of sodium, when, partial fusion taking place, the sodium and lime exchange their combinations—the sodium passing into subcarbonate of soda, and the lime into sulphuret of calcium. The soda is then separated and purified by lixiviation. By using sulphate of ammonia to decompose salt, all the heavy outlay for building large leaden chambers, the expense of making sulphuric acid, the enormous destruction of the materials of the furnaces and tools for decomposing salt, and the nuisance and damage arising from the escape of muriatic acid vapour, will be avoided. I will now point out a few purposes to which ammonia, when produced at a cheap rate, would be advantageously applied. The muriate, mixed with lime in a close vessel, with a pipe leading into water, an ammoniacal liquor would be easily procured for washing sheep and wool, taking the oil out of woollen cloths, and cleansing all greasy articles—as furs, skins, and hides. The treatment of the latter with ammonia, instead of lime, would be likely to lead to great improvement in the quality of leather. In agriculture, the use of ammonia would be attended with many benefits. When land was much overgrown with weeds, or coarse and unserviceable vegetation, to apply first a good sprinkling of fresh lime, and then water it with a solution of muriate of ammonia, would quickly kill all living vegetation, and convert it into valuable manure for future crops. Applied in a milder form, the muriate of ammonia, mixed with ground chalk, and other additions, suited to the soil and intended crop, it would act as a good manure, or artificial guano. When I addressed a short letter to you, about a fortnight ago, I confess it was merely as a joke—not for a moment supposing the dons of the copper trade would condescend to notice such a trivial matter as sulphate of ammonia. I write this in all seriousness, having met with parties thoroughly informed upon the various subjects involved; and, after mature deliberation—being satisfied of its practicability—we wish to direct the attention of the mining companies of the principality of Devon, Cornwall, and Ireland to it. Sulphuret of iron—as pyrites, mundic, or sulphur ore—will answer for the formation of sulphate of ammonia; after which the iron will be left, part nearly in a pure metallic state, the remainder highly oxidised—the two together being in a very proper state for the blast-furnace—to be smelted into iron. The co-operation of parties taking a lively interest in agricultural pursuits, would be desirable. The object of this is, to furnish materials for thinking during the preparation of a more detailed form.

Swansea, July 16. Jupiter Ammon.

INCRUSTATIONS IN BOILERS.

Sir,—I notice a paragraph in the *Mining Journal*, to the effect, that a handful of *alum* will remove the deposit in boilers, arising from "*hard* water." If the incrustation is composed of an insoluble sulphate of lime, no doubt a solution of alum, in virtue of its being a bisulphate, or supersulphate, would accomplish this purpose, by the loosely combined acid in the alum, rendering the insoluble "gypsum" a soluble sulphate.

Portland-place, Hull, July 21. J. Murray.

IMPROVEMENTS IN SMELTING IRON.

Sir,—In your Journal of May 15, I noticed some inquiries from "A. Z.," respecting certain improvements he had heard of in the smelting of iron in Derbyshire, made by a Mr. Yates. I beg to say, that I am the individual alluded to, and should have replied earlier, but, from various causes, have been prevented doing so. However, I now desire, through the medium of your Journal, to answer those inquiries, by giving a short statement of the leading features of my improvements, and the practical results arising therefrom; also, to correct certain erroneous impressions which may have been formed; and, at the same time, to leave those acquainted with the iron trade to form their own estimate of the value of those improvements. In the beginning of June last year, I commenced the erection of furnaces and working of mines at Wingerworth, near Chesterfield, Derbyshire; and in December last, I had one furnace in full work, and making very superior iron, which it has continued to do up to the present time. My improvements consist principally in constructing the blast-furnace in such a manner as to cause the burden to enter into a state of fusion quickly, and to remain in the furnace as short a time as possible, compatible with the materials used, and the quantity of iron made. I am aware that this principle is opposed to the generally-entertained opinion, that a long process of cementation is necessary to the production of good iron; and also that the construction of my furnace, being very low, and having a very contracted tunnel-head, is the reverse of those generally used, which are very high, having wide open tops. I use, in working my furnace, a very low-pressure of blast, in preference to the high-pressure in common use; and I distribute the blast more equally around the hearth of the furnace than is customary—the peculiar construction of my furnace answering to this kind and application of blast. In blowing, I prefer the patent fanner, on account of the uniformity of the pressure of blast obtained by it; but I do not confine myself to this mode of blowing. I also obtain a uniform pressure of blast without the usual regulator, by a peculiar method of working two or more reciprocating steam-engines and blowing cylinders; also, as applicable to engines and blowing cylinders, as at present used, I apply a newly-constructed blast-regulator, which is balanced by the steam from the engine-boiler.

The furnace I have now at work is about one-third the height, from the tuyeres to the surface of the burden of the furnaces now generally used. I blow with hot-blast, through six tuyeres of 1¾ in. diameter each, with a pressure ranging from 1 lb. to 1½ lb. on the square inch, and supplied by a pair of small patent fanners, 33 in. in diameter, and am making, on the average, from 15 to 17 tons per day (of 24 hours) of excellent iron, for forge purposes, from ironstone, producing under 30 per cent. of iron from the raw stone, the charges being 12 cwts. of calcined stone to 5½ cwts. of coke; and the better quality of iron is suitable for the finest description of castings. The furnace works with the greatest regularity, and with ease to the keepers, as the tuyeres keep open and bright, and not the slightest heave is ever observed at the dam. The chief advantages derived from the above arrangements are—1. The great reduction in the first cost of erecting iron-works.—2. The great saving in engine-power required to produce the blast.—3. The saving in power in raising the burden.—4. The saving of fuel in smelting.—5. The saving of iron which takes place, in consequence of the stone at the melting point passing rapidly through a soft, instead of a dense, blast, which also improves the quality of the iron produced.—6. The dispensing with the necessity of water-regulators, air-vaults, fly-wheel, and beam, which, in my present system of producing a blast, are quite unnecessary; and 7. The saving of time and expense in blowing in, blowing out, and in repairing the furnace. James Yates.

Carr House, near Rotherham, July 20.

DANGERS ATTENDING THE MANUFACTURE AND USE OF GUN-COTTON.

Sir,—Another fearful accident with Schönbein's gun-cotton appears to call for a careful scientific investigation of all the circumstances under which it is likely to explode, for it is very evident that the dangers attending its use are not at all understood. I am inclined to think that we have adopted too hastily an invention, perhaps to be made serviceable enough, but which is likely to kill some hundreds before we can get experience in its management. It does not appear, from the evidence which has been obtained at the inquest at Faversham, that there is any opinion at all as to the probable cause of the explosion which has just happened at the Messrs. Hall's; nor are we warranted, at the present stage of the inquiry, in hazarding any opinion upon it; but I take the liberty of directing attention to a few facts, which may serve to guide the jury in their investigation. It will be remembered that, about three weeks since, a similar explosion of gun-cotton occurred at the rocket manufactory of the Messrs. Wade, at West Ham. They were endeavouring to construct a rocket of gun-cotton which should be equal to a 12-pound congreve, ramming it in the usual manner by means of a drift, which was hit by a 36-pound monkey falling from a height of 10 feet. The cotton was introduced in charges of 1 oz., each charge being previously subjected to a pressure of 3 tons, and then served with 40 blows from the monkey. In this way they had contrived to bang about 2 lbs. of weak gun-cotton into a case 18 inches long, and 2½ inches in diameter; they had given it 1190 blows, and it was then examined by the foreman, who pronounced that it would be complete after given it 10 blows more. It appears, however, that they had given it only one blow after his order, when it exploded, driving out the side of the house, killing two men on the spot, and so injuring a third, that he died 24 hours afterwards.

Having been called upon by the coroner, Mr. Baker, to give my opinion as to the probable cause of the accident, I took some pains in going over the facts of the case, and was led to believe that the explosion arose from friction, arising from the percussion of the drift on the hard-rammed cotton. Not feeling satisfied, however, with this, which was merely an opinion derived from my particular view of the facts, I was tempted to make a few experiments upon it, and the result was, that gun-cotton could not be driven into cases by blows without great risk of explosion, whereas I found it might be pressed into a similar space by means of a lever or screw, without such a risk. In this way I managed to compress about 300 grains of it into the space of one cubic inch, and this I take to be the highest degree of compression to which it can be subjected with safety. The result of these inquiries was made known to the coroner for Essex, Mr. Lewis, who advised the jury to introduce that caution into their verdict.

I may observe, however, that my experience in the properties of gun-cotton shows that it is a very unsafe substance, and that it will explode often under circumstances when least expected—for example, it is recommended by the patentee (Mr. Taylor) to dry gun-cotton in a room heated by steam, or otherwise, to a temperature of 150° of Fahrenheit. Now, under ordinary circumstances, this is tolerably safe. I have, in fact, dried quantities of it at a higher temperature than this. Schönbein states that it may be dried at 280° Fahrenheit, and requires a temperature of 410° Fahrenheit to fire instantly; nevertheless, I have often found it to fire upon a plate that could not have been heated above 150°. Again, in every sample of gun-cotton, there are particles which will fire at a lower temperature, and with less friction than the rest. Now, as these cannot be decided upon without actual experiment, there is some risk in its employment.

Thirdly, it is recommended by the patentee to drive, or pack, the gun-cotton damp into the cases. This is, I think, another source of danger, for in every experiment known, gun-cotton is more liable to explosion when slightly damp, than when quite dry. It is, in fact, in the act of drying, that gun-cotton fires so readily; and again, I have known cases of it fire spontaneously, when they had accidentally got damp, and, as I believe, from the heat evolved in the process. Lastly, I am not altogether sure, that there is not danger of its firing, from the electricity which is developed during its compression; it is a fact, that a high charge of electricity is effected by the friction, or compression, of it; and it is also a fact, that a spark from an electrical machine will fire it. Altogether, however (and this is the object of my letter), I think there will be no difficulty in concluding, that the properties of gun-cotton have not been sufficiently investigated—that it has not received that amount of scientific attention, to place its applications upon a safe, or a certain footing, and that there is much danger in the present indiscriminate management of it. Public safety appears to demand such an investigation of its properties, and so do the rights of the patentee, and the probable value of its applications.

London Hospital, July 20. H. Letheby,
Lecturer on Chemistry at the London Hospital.

THE DEE BRIDGE ACCIDENT.

Sir,—I consider that iron girders and similar supports ought never to be made of *cast*-iron, but of wrought-iron, and composed of plates *twisted* previously into a rope, and finally moulded into the required form; a trusty "Toledo," or a Damascus blade, being so worked and moulded, will bend, indeed, but *never break*. J. Murray.

GOVERNMENT INTERFERENCE IN MINES.

Sir,—Your correspondent (Mr. J. Hall) is quite right, respecting the disadvantages arising from a paucity of shafts. This is in Mr. B. Gibbons's pamphlet a chief point; I have done all in my power, in the *Mining Journal*, for six months to urge these views. But Mr. Hall will admit at once, this is not a benefit which it is necessary to secure by a multitude of sub-inspectors. Pits are a long while sinking—the necessity for them approaches by slow degrees—a minimum amount of inspection will ascertain the fact, if they are needed. Were the question reduced to as definite a form as it will admit, for absolute rules cannot be made, where expense in deep and difficult situations *must* be regarded, one single surveyor could make the circuit of the whole kingdom two or three times in a year, and one twelvemonth is the shortest interval in which the necessity for a new sinking is likely to arise. There is more sense in the suggestions of Mr. Tremenheere, than in any report that has yet appeared. Of the Jarrow Colliery I may be misinformed, but have understood that tremendous explosion was in a newly-opened shaft. So far as the extent of a colliery affects the question *after an* explosion, I think Mr. Hall will perceive there are more chances of a safe position until communications are restored; but that ventilation is, in the *first instance*, impeded by such extent, is indisputable. I have no wish to cast reflection on working miners as a class—on the contrary, I have shown a certain daring is absolutely part of the calling, which, perhaps, only in the hundredth individual merges into rashness. As a *body*, they are, undoubtedly, prudent as well as bold; but this one *exception*—this temerity in one person—irregular, but, perhaps, inevitable as we are constituted—has the power to destroy a hundred lives. I wish justice to the men as well as to the owners; and no one, without a prejudiced motive, can raise a cry against the latter as the *sole* cause of calamities. It would, Sir, be a most interesting document, could you procure a statistical table of accidents by explosion during the past 10 years, giving the immediate and the proximate causes of each. One vexation would be dismissed by its evidence—the false notion that security can be gained by abolition of *naked lights*. Mr. Deakin rightly asserts, this is the worst measure that could be passed—an effectual device to perpetuate danger. Far better (as he says) abolish the lamp itself—such a table will prove *these*, in the majority of cases, have been the inflaming medium, from risks engendered by their presumed protection. They have induced owners to bear with a degree of ill ventilation, that could not otherwise have existed.

It is certain, in the great calamity at Barnsley, that had there been no lamps, a demand before the fatal time would have been made upon the hesitating energies of the partners, and the necessary additional shaft been *sunk* instead of *contemplated*. In most portions of that colliery, men were working with candles, but in the dangerous part, a *lamp* was needed; by indiscretion in its use, the safety of the others was destroyed. It is clear, therefore, *that dreadful accident was occasioned by the safety lamp!* It will not do, in a comprehensive question, for bigotted or interested parties to take a single feature in their teeth, and tear it to tatters; on a united consideration of *every* particular, a remedy must be founded. This is the essence and meaning of *wisdom* in all the dealings of life. In the progress of mining, some new feature always arises. Three explosions in as many months have proceeded from an ingress of gas from old workings. This cause must evidently increase, and will have to be met by its peculiar remedy. In another explosion, which has created sensation in your columns, as connected with the system of Mr. Gibbons, that accident proves its efficacy—it took effect in the appointed receptacle, or sewer; and the man who, by gross disobedience, could leave there his naked light, was as likely to have left his lamp exposed It is deplorable when interested men make common misfortunes available for private gain. The danger which gas occasions, is alike a common misfortune to masters as to men: it is a serious evil, requiring joint energy, attention, and care, to counteract; nor can any words express sufficiently the condemnation of those, who, like the heartless wreckers in a storm, use this evil to foster a spirit of variance betwixt the collier and his employer. From the tremendous accident which, since my allusion to the inspectorship of powder-mills, has occurred at Faversham, is there any man daring enough to sow dissension, and lay the blame upon the master's negligence? I believe, as I have stated, there will be no proposal of inspectors for powder or gun-cotton mills, because the field is not sufficiently extensive; but I believe they who seek to feed on the heart-rending calamities of mines, and can by statements prevail on a legislator to expose himself to assert that it will be necessary, if a bill is not passed to protect the working collier from their (demon) masters, that the Secretary of State must preserve, during the recess, the peace of colliery districts by the military force. I believe such persons are capable of asserting (whatever their object), that the explosion at Faversham *was the master's intentional act.*—D. Mushet: *Gloucester, July* 20.

GOVERNMENT INSPECTORS FOR MINES.

Sir,—Feverishly anxious as I am to see a right system of working and ventilation of coal mines introduced, and one founded on sound and scientific principles, and a watchful jealousy moreover exercised over the lives of miners by Government, I, nevertheless, repudiate with scorn the infamous surveillance and *espionage* invoked by Duncombe's impertinent meddling with a subject—a task for which he is entirely incapacitated. Hitherto we have received no practical benefit that I can see from those who have already been deputed by Government. What earthly good, for example, has accrued from the perambulations of Sir Henry De la Beche and Dr. Lyon Playfair?—None whatever. If Government were to appoint a board, composed of individuals of sound scientific talent, connected with the various questions which directly or indirectly affect mining operations, with a full compliment of enlightened practical miners, to whom any question which might arise in working mines or their ventilation might be referred, and submitted for advice and assistance, much good would unquestionably result; and I am quite sure none would be more ready to welcome their labours than such judicious enlightened men as Mr. Gibbons. But a petty, prying, and capricious, meddling on the part of individuals, such as was contemplated by Duncombe's abortive scheme, would be an intolerable nuisance. An occasional inspection of mines, under due regulations, and a thorough investigation of accidents when they occur, would not be precluded in such an arrangement as I consider advisable and have suggested; but there are excellent and worthy coal proprietors who would, with equal scorn and indignation, justly spurn being made the *bondsmen* of a petty tyrant, or a pensioned hireling.

Portland-place, Hull, July 21. J. Murray.

THE SPRAY PUMP—DRAINING MINES.

Sir,—The defects of the usual methods of raising water, and the loss of power consequent on moving the large bodies of machinery necessary for draining mines of great depth, are, in themselves, so obvious, as to render the subject of the highest importance to the engineering world. Any mode of pumping, which proposes to do away with these defects, calls for careful consideration. The time has passed away, when inventions were set down as chimerical, because they were new; experience has given us confidence, and we now lend a willing ear to any project which tends to increase our knowledge, or add to our scientific attainments.

About a month since, the attention of your readers was called to an invention, which, from the report of its trial, bids fair to prove one of the greatest modern discoveries—I allude to Adcock's spray pump. From the little information I have as yet been able to gain on the subject, it appears to me, that nothing hitherto brought before the public, fulfils so well the conditions requisite for economical and efficient drainage. The theory is as novel as beautiful, and seems calculated to produce the greatest possible useful effect, with the least waste of the power employed. If Mr. Adcock has been as happy in the adaptation of the idea to practice as in his original conception, I have no doubt of its being universally adopted. The importance of the invention applied to deep mines (as in the 260 yard pit at Victoria, instanced by you a week or two since), renders it still more worthy of attention. The ponderous pump-rods used in sinkings of great depth, and the enormous waste of power in giving them, as well as the column of water raised, a recurring, instead of a continuous, motion, have hitherto vastly increased the expense of such workings. In the spray pump, we have a plan *which seems* at once cheap, simple, and effective; at all events, the late trial at Lanhilleth fully warrants the closest inquiry, and the most sanguine expectations as to its utility. If any of your correspondents, acquainted with the district, will favour me with a full description of the working details, and their practical application at this colliery, together with the depth and size of pit, ordinary feed of water, size and power of steam-engine, pressure of blast used, and such other information as bears upon the subject, I am convinced the description will prove highly interesting to your readers generally, as well as to

Bermondsey, July 19. An Inquirer.

THE AMERICAN STEAMER, "WASHINGTON"—KYMER AND LEIGHTON'S FIRE-BARS.

SIR,—I have just read in the *Mining Journal* of the 17th inst., a short account of the return of the American steam-ship *Washington* to Southampton, after destroying two sets of fire-bars, which you state "a committee of the passengers attributed to the bad quality of the coals—a species of anthracite, much resembling the American." I beg to make a short comment upon this. The destruction of the grate-bars was owing to the superior quality and strength of Welsh anthracite coal over the American; the latter contains a very large proportion of ash, or earthy matter, which protects the grate-bars from the joint action of carbon and the blast. There is but one vein, or seam, of anthracite in Wales which can be used with a blast and common grate-bars; this contains about 20 per cent. of ash—that is, earthy impurity. The generality of Welsh anthracite will not average more than 4 per cent. I enclose you a circular [see advertising columns], consisting, for the most part, of extracts from your valuable Journal, in which you will find the analysis of some coal containing only 1·18 of impurity in 100 parts. With such coal as this, I have run a set of bars together in less than two hours; this was owing to the strength of the fuel, not to any inferiority in quality. In order that such fuel as this might be applied to steam navigation, by the use of a fan-blast, I contrived a grate having a trough of water under each fire-bar. As I have so repeatedly brought this matter before your readers, I refrain from further comment, than merely to state my decided opinion with respect to the *Washington* steamer. I know nothing of her qualities as a sea-boat, but, *cæteris paribus*, referring merely to the generation of steam. Had the *Washington* gone to sea fitted with Kymer and Leighton's grate, using the Garnant big vein coal (some of which I believe was shipped at Llanelly for her use), and an ample blast, no steamer on the ocean would have kept up with her. Although wearied out, and disgusted by the neglect and apathy with which the anthracite coalowners have always treated this plan, I cannot resist the impulse of placing the merits of the case in a true light.—T. H. LEIGHTON: *Llandebie, near Llandilo, July* 18.

THE EXCAVATING MACHINE.

SIR,—A few years since you published, in your valuable and generally correct Journal, some very flattering accounts of an "excavating machine," which, if I mistake not, was at work near London, and inspected by yourself, and several practical engineers; I think the machine was either from, or invented in, America. Can you inform me, whether the machine eventually proved a failure, and from what causes?—or, if not, why it has not been employed on railways?

York, July 20. A SUBSCRIBER AND RAILWAY SHAREHOLDER.

[We are much obliged to our correspondent, for reviving attention to this invention—the importance of which we have often remaked upon. We shall endeavour to communicate with the patentees, and obtain the necessary information, and which we shall have pleasure in publishing.

THE MENAI TUNNEL, OR BRITANNIA BRIDGE.

RESPECTED FRIEND,—A few years since, the Editor of the *Manchester Guardian*, in a satirical article, remarked, that all great inventors have a little of the poet in them; and it is not, perhaps, very astonishing, if an individual, reported to be such, should find a poetical panegyrist. These thoughts have been suggested by the perusal of the "Extracts from a Note Book," published in last Number of the *Mining Journal*. Were we not told that Wordsworth "scorns the railways," we might suppose that his genius had presided over the composition of that article; we have, in fact, to go a long way down before arriving at that part, which more immediately concerns the readers of the *Mining Journal*—the scientific part. We have then a description of the work in respect to the length, height, and width of the tubes, and the quantity of metal required for their construction; but the very part of which the less is known—the *form* of the tube—is not given. The writer was evidently too high in the clouds to notice *that*—his business was to take a bird's-eye view of the glorious scene, while soaring as an eagle above the mountains. What he there saw is explained with a true sublimity, but to enter into vulgar details is not his province; he admires the marble statue, but would scorn to be an anatomist. This is precisely the range of a poet.

In the description of the Menai Tunnel, published two years since, G. Stephenson stated, that the rectangular tube would be adopted; but a long time after, this plan was thrown aside for the cylindrical. It was said, that it would be constructed in the form of a double-barrelled gun: but the poet says, that each tube is 30 ft. high, and 14 ft. wide; so that, how far it is built of the strongest form—the cylindrical, according to Prof. Hodgkinson—is left to be guessed. We are sometimes told, that an M.P. has contrived to make a speech one way, and vote the other, and, perhaps, the professors of the present day have had some experience in that line. By the way, I have seen many double-barrelled guns, but I never saw one that would fire both ends. It will be seen, that the cost of the work will be at least equal to the sum expended on the Thames Tunnel, or about the same amount as I have estimated for constructing five miles of submarine railway; and this immense expense is incurred merely to carry a railway 20 miles nearer Ireland. Now, the cost of joining Dover and Calais by railway, would be less than 3,000,000*l.* sterling—a railway which would, as it were, change the geographical position of Britain with the continent, for the 20 miles of sea would no longer exist as regards communication with the rest of the eastern hemisphere; but to carry out this project, the opposition of eminent engineers must be surmounted. This is, in reality, the greatest obstacle; they will favour the progress of science, provided it favours their own interests also, otherwise they will thunder against improvements with all their might; in fact, this is the case with everything new of importance. There is but little probability of the world reaping the benefit of the latest railway improvements for many years.

The round rail of Greenhow, the centre rail of Clonsen, the iron bridge of T. Motley, and the atmospheric railway, are evidently destined for another age; for the only court of appeal in such cases is composed of a few engineers, who, enjoying the monopoly of having all the important works of the country under their guidance and control, are, in respect to inventions, both legislators and judges. Many inventors, in their blessed ignorance, have imagined that it was only necessary to prove that their plans were superior to others to get them adopted—being little aware of the amount of patronage required before they, and the public, can reap the benefit of those inventions. It is not generally known, that a vast number of improvements have been patented, which, if adopted, would put an end to those terrific accidents which seem so inexplicable to the uninitiated. The fact is, that those inventions have not come from the brains of the reputed eminent engineers, and on that account they are thrown aside as worthless, until the public opinion is sufficiently excited to demand an improvement. It is rather astonishing, that the inventors of Britain do not combine to form an *Inventors' Guardian Society*; such an association would soon destroy the influence of a clique of engineers, who assume the title of oracles in regard to improvements, and who consider inventors as traitors against their usurped sovereignty, as though it was the height of impudence for any one else to be so presumptive as to invent—in fact, an inventor is now nearly in the same predicament as an author would be, if he were not permitted to publish his works, until they had been favourably noticed by the *Blackwoods* and *Quarterlies*; yet, if such a law was proposed, would not the whole press rise against it, and denounce it as the most tyrannical law that could be imagined? But, I may ask hundreds of inventors, if they are not under the control of a similar system? I frequently receive communications from inventors to the effect, that, having submitted their inventions to different individuals, the only answer they have received has been the adoption of their inventions without acknowledgment—some of these under circumstances calculated to excite the deepest indignation. I have had some experience in that line myself—thus: I submitted to G. S. a plan for constructing wrought-iron tunnels for railway purposes; he looks over the description, and approves of it, but on condition that he will pronounce the locality in which the tunnel is to be placed. He then sends the plan into the world as his own invention, under the pretence that, having placed it in another locality to that originally intended, he can claim the whole, without acknowledging the original invention. This is precisely the same case as if Claudet, or Beard, denied that Daguerre had anything to do with the discovery of photography; or, as if it was asserted, that Dr. Clanny had not discovered the safety lamp. The poet says—"The inventive genius of R. Stephenson declared that the new bridge should be two iron tubes, or railway tunnels, made of iron plates." Whether the supposed invention is a plagiarism is of no importance to him, be is merely the panegyrist of the engineer: by the way, the project was at first ascribed to George Stephenson, but lately the credit of the invention has been transferred to "the son"—that is, to the future Member for Whitby. Perhaps, the father had a too tender conscience to retain the borrowed feather?

The poet continues—"May Stephenson achieve a triumph in art this day, as undoubted as was the triumph in war of Wellington and Anglesea on that day! How glorious for him and England if he does! But why, *if?* He *will* triumph—he has risked nothing here—he has reduced everything to certainty." There is no doubting it; G. S. would undertake to suspend a tunnel from the top of the Monument to St. Paul's, and he *would* succeed—that is, provided he could find the shareholders; for it would be merely a question of pounds, shillings, and pence, or other such vulgar calculations, which should not be thought of when an eminent engineer is the presiding genius. It is possible, however, that in respect to works, in which economy is not the order of the day, the ideas of the shareholders, however agreeable they may be, are quite apart from the poetry of the thing. Money is a dull prosaic reality. As regards the Menai Tunnel, it is quite true that "G. S. has risked nothing;" he is merely ordering the construction of a structure which another has invented, with money which others have subscribed. A glorious achievement for him and for England. Surely, triumphs are very easy in these peaceful days! But I must leave this strain for the present, although I have something more to say to G. S., which must be in a future communication; but, *en attendant*, I will prepare a description of the plan for "conquering the sea," to use the words of the president of the *Liverpool Polytechnic Society*. By this plan there will be no work under water, beyond guiding the divisions of the tunnels in their descent—the platform, cradle, flange, and breakwaters being banished. Perhaps, the sight of this plan will terrify G. S. into the belief, that the "discerning public" will not require the favourable opinion of his engineership, before attempting to achieve this "glorious triumph," which would make both nations forget the name of Waterloo. Permit me to suggest, *entre nous*, whether it is not possible that the poet has given a description of the old plan of the Menai tube, and that the new plan has not yet "come out." JOHN DE LA HAYE.

Liverpool, 7 *mo.* 19.

THE MENAI TUNNEL-BRIDGE.

RESPECTED FRIEND,—If the account given in the "Extracts from a Note Book," in the *Mining Journal* of last week, relating to the above-mentioned bridge, is even nearly correct, then it must be admitted that the quantity of material proposed to be used—viz.: nearly 8000 tons—will be most ample, *if properly disposed*, to secure perfect safety. If, however, the *wrought-iron plates of even ¼ of an inch thickness are intended to sustain the whole strain of the load*, I have no hesitation in stating, that its own weight will produce its destruction; but as I am not acquainted with the actual mode of combination or construction, of course I can give no opinion, except based upon the assumption just named.

If the statement of the quantity of iron is correct, then I affirm it as my decided opinion, that the proposed tunnel will cost at least from *three to four times more than the plan I proposed for the Clifton-bridge*. Supposing the average cost of making this wrought-iron tunnel, including the expense of fixing, &c., &c., to be (say) 40*l.* per ton, this would make a total of 340,000*l.*; but, as I presume a considerable portion will be cast-iron, let us suppose that it might be all completed at an average cost of 30*l.* per ton—this would make 240,000*l.* Now, upon the plan I propose, I do not think it would require 1500 tons to make the whole, with a floor, or platform, of from 30 to 40 feet wide, and capable of sustaining, *with absolute and perfect safety*, from 800 to 1000 tons, which, at 30*l.* per ton, would be 45,000*l.*, making the astounding difference of nearly 200,000*l.*—an item which one would think sufficient to induce the company, whom it may concern, to cause an investigation to be made. I will further observe, that if the company *cannot prevail on parties in the north* to undertake it, I can recommend them one or two firms of the first respectability in Wales, or a company in the neighbourhood of Bristol, who I think would gladly undertake it. One of the party in the latter concern stands, in my opinion, as a *practical engineer*, second to no one in the kingdom, and who is thoroughly acquainted with the nature and uses of cast and wrought-iron. I, however, presume from the high reputation of Robert Stephenson, as a man of honour and integrity, he will be open to conviction; and, if convinced, will recommend its adoption, which I shall be glad to see, though I may never be benefitted thereby.

It certainly appears to me as extraordinary, that R. Stephenson did not recommend a structure involving the same principle as the one he is now carrying into execution at Newcastle—viz.: the principle of the bow and string, which I term the *arch suspension*, and which is alluded to in the article in Dr. Lardner's *Cyclopædia*, 1831, and mentioned to G. Stephenson and Son at Liverpool in 1830, and which plan was subsequently proposed for a bridge over the Thames in 1834, which was noticed by all the principal daily papers. I also constructed a small bridge on the plan for the directors of the Newcastle and Carlisle Railway Company, at Newcastle, in 1832; James Losh, Esq., of the firm of Losh, Wilson, and Bell, who was the means of my making the said bridge, and (who was at the same time co-patentee with George Stephenson for a fish-bellied rail) was so pleased with the invention, that he proposed to join me in securing it by patent, but some time after declined it, without stating his reason why—I must, therefore, leave the public to form their own conclusion on that and other matters referred to. Your readers, and the public, may readily conceive the plan, by imagining a bow tied at the foot with a string, and then imagine a parallel line at the top, running horizontally the whole length of the bow, and these lines connected at suitable distances by vertical lines passing through the bow—thus constituting, as Dr. Lardner very properly described it, a skeleton beam, so as to allow of a passage through it, unerring in principle, and only requiring practical engineers to determine the required strength of materials to sustain the pressures and strains—so as to obtain perfect security. A bridge of this kind, with a rise of (say) 30 feet in the middle, 460 feet span, 28 to 30 feet wide, would not require more than about from 500 to 600 tons of cast-iron, and less than half the quantity of wrought-iron, to sustain a load of 1 cwt. on every foot, or from 800 to 1000 tons. Still, for many reasons, I prefer such a fabric to be composed *entirely of wrought-iron* on the plan proposed at Clifton, even if it were more costly, which, in my opinion, would not be the case. I will only further add, that the masonry now preparing for the tunnel will be suitable for either of the plans to which I have alluded.

London, 7 *mo.* 18. THOMAS MOTLEY.

P.S.—I may add, that I submitted my plan, for what I termed the arch suspension, in 1828, to many of the most eminent engineers and mathematicians of that period, among whom I may mention Bramah, Maudslay, Barlow, Seward, Sir John Rennie, Sir Mark Brunel, Tredgold, Dr. Birkbeck, Dr. Lardner, Davies Gilbert, &c., &c., all of whom approved highly of its principle.

The following are extracts of letters from the eminent T. Tredgold, dated from Grove place, Lisson-grove, July, 1828:—"*The method is a most valuable one, where the construction of abutments is expensive, and where the curved ribs are of the proper figure, and of the proper degree of strength and connection, to resist both the constant and occasional stress on the bridge; it will undoubtedly form a safe and economical structure—its expense will obviously be intermediate between a suspension and a common iron bridge, and exceeding a suspension bridge, at least, as much in stability, as it does in expense.*" "*I am not aware that a bridge, or a design of a bridge, was ever made with the idea of executing it in iron on the principle of your model.*" I observed in Paris some very ponderous fronts of buildings, supported by skeleton beams, made entirely of wrought-iron on the same principle.

DE LA HAYE'S PROPOSED SUB-MARINE RAILWAY.

SIR,—As a constant reader of your valuable Journal, I have noticed Mr. De la Haye's project for constructing railways under water in wrought-iron tubes, and am surprised that none of your talented correspondents have thought of exposing the absurdity of (at least) one portion of his plan. For rivers of the width of the Thames, or probably up to half a mile, tunnels of this description could be safely and economically constructed, and, in situations where bridges were impracticable, would be a great public convenience; but I should like to be informed in what manner your correspondent intends to provide for the ventilation of a tube 24 miles in length, laid at a depth of 200 ft. in the raging waters of the English channel; or whether he proposes to run at such lightning speed, that the passengers may dispense with oxygen on their passage, and hold their breath until they arrive at the other end? In all tunnels on land, it is found absolutely necessary to have ventilating shafts at about every quarter of a mile; and how such are to be provided for at the bottom of the sea, I am at a loss to imagine. It will be obvious on consideration, to all persons acquainted with the properties of the several gases, that a number of passengers would, in a few journeys, convert the whole contents of the tube into a mass of carbonic acid gas—the passage of one locomotive would render the air totally incapable of supporting animal life—and, even supposing the length not too great for effectually working the railway on the atmospheric system, the former objection is a fatal bar to the adoption of the plan: this is, supposing it possible that the tube could even be constructed, which I very much doubt, as the always rapid current, and frequent storms, would continually disarrange every attempt in connecting the sections, and keeping them firm in their places. As I have before observed, for many river situations, the system is feasible enough; and, by maturing his plans for these, Mr. De la Haye will probably confer a boon upon the public—while by persevering in asserting, that an undertaking is easily accomplished, which all other men know to be impossible for any useful purpose, the writer only gives the public reason to think but poorly of his talents or reflective powers.—Q——.: *Tonbridge, July* 20.

IRON BEDSTEADS.

SIR,—Nothing is more certain than the fact, that, should lightning fall on a building, or enter its precincts, where there are iron bedsteads, that these would suffer—because, while such would attract the lightning, their being insulated, and having no connection with the earth to facilitate, by a *conducting* medium, its escape thereto, they would become the victims of its fury: the *large mass* might, indeed, by distribution and diffusion, attenuate its power; while conductors of more limited dimensions would be entirely fused, or oxidised. Candlesticks have been melted—hat-pins broken—bell wires, and even coins, fused and dissipated; metallic furniture, such as rings connected with the bed, have been destroyed—and yet the recumbent occupant, from being insulated by means of the mattress, or bed clothes, has escaped. I consider, that iron bedsteads are not a little hazardous, unless the building has been protected by a superior conducting medium in the shape of a lightning rod, constructed on proper principles. Cast-iron bridges, railways, steamers, iron warehouses, and forges, escape the destructive effects of lightning, from the *extent* of conducting surface presented to the meteor, thus attenuated by diffusion, and, therefore, dispersed and disarmed. It is the concentration of lightning which is to be dreaded, and the impediments and obstructions it meets with in its tendency to the earth, as such interferences would increase its power and virulence; besides, conductive materials, in large masses, may neutralise the power of lightning by superinduced induction.

Portland-place, Hull, July 21. J. MURRAY.

SUTTON HARBOUR IMPROVEMENT, PLYMOUTH.—This Act, which has created the deepest interest at Plymouth, confers powers on the company thereby incorporated, to deepen and improve the harbour of Sutton Pool, which has for centuries been the almost exclusive mercantile harbour within this important and flourishing port. The measure was most strenuously opposed in the Commons, where it underwent considerable modification, and was again opposed in the Lords, when, after several days' investigation, it passed without amendment, and received the Royal Assent on Thursday last. This Act has created very great interest, on the ground of its being associated with the London and South Western (narrow gauge) Railway, who sought Parliamentary powers to subscribe towards the undertaking, which was opposed by the Bristol and Exeter Railway Company, who appeared by their counsel and solicitor; and covertly by the South Devon and the Cornwall Railways, and the Great Western Docks Company (a competing scheme within the port), who were stated by counsel for the opposition, to have been prevented by the Duchy of Cornwall from appearing as petitioners against the measure—a statement to us unaccountable, as all these companies have obtained the sanction of the Legislature. The main feature of public interest in this Act is its being, as far as we can learn, the first instance in which *Legislative powers* have been granted to a railway company, to subscribe to a dock, or other undertaking, of a nature different to that for which it was originally incorporated—a power which, in our opinion, should be *most jealously watched*.

THE NEW BREAKWATER IN PORTLAND ROADS.—We have before us a pamphlet, by Major Samuel Parlby, on the subject of the breakwater about to be constructed in Portland Roads, with suggestions and reasons for an alteration in the plan. Major Parlby has been constantly residing at Weymouth for more than 12 months, and has paid much attention to, and made himself well acquainted with, all the circumstances connected with the proposed harbour of refuge. The plan, as at present proposed, is to construct a breakwater 1700 feet in length, from or near the north-east point of Portland, taking a direction due east; an opening is then to be left for vessels of about 150 feet; commencing again, the breakwater is to be continued north-east about 6000 feet—thus making the whole extent one mile and-a-half. The alterations Major Parlby proposes are—to reduce the breakwater in length one-half; to leave no opening, but formed in one continuous line; and that a second breakwater should be constructed on the Weymouth side, commencing at the point of the present pier, or the east point of the "Nothe," and extending for about three-quarters of a mile in a direction towards the north-east end of the Portland breakwater. The two plans are then placed in contrast—the supposed defects of the proposed plan in one column, and the supposed advantages of the alterations in an opposite one, by which method the whole subject is placed in a fair and lucid manner before the reader. These are followed by extracts from the Parliamentary Report of the Commissioners upon the subject of the harbour of refuge in Portland Roads. The pamphlet concludes with a description of that wonderful natural breakwater, the Chesil Bank; it is about 16 miles long, extending from Portland to Abbotsbury, and on to Burton Bradstock. The part, however, here described is the line from Portland-bridge to Portland, a narrow isthmus two miles in length, connecting Portland with the main land. This bank is composed of rounded shingle, resting on a base of Oxford clay, slaty bituminous schist, and marlstone; the measurement in its narrowest section, about midway between the bridge and Portland, is about 40 feet high and 800 feet in breadth, at low-water level. These pebbles differ from the strata in the neighbourhood, and the question, whence this immense body of shingle comes, is not easily answered; the stones are beautifully rounded, and one of the finest sea views in England is here obtained.

WESTERN VIRGINIA LAND COMPANY.—This company has been formed for the purpose of securing to emigrants the possession of valuable land in good situations, as relates to healthiness of climate, fertility of soil, and facility of approach. It comprises 1,000,000 acres of virgin soil in Western Virginia, near the River Ohio, affording the advantage of river navigation, and where the Baltimore and Ohio and Richmond and Ohio Railways will add largely to the value of the produce. The land will be parcelled out in 80 acre sections and upwards, correct maps of which will be kept in the office; a deposit of 6d. per acre will be required upon any quantity purchased, but the selection of the particular lot may be made on his arrival; and, after personal inspection, the remaining portion of the purchase-money will be secured on the land, payable, with 6 per cent. per annum interest in five years from the date of purchase. Any shareholder who may wish to emigrate, or purchase land on his own account, will be entitled to take of the land then unsold any quantity, equal in value to his paid-up calls, and thus be enabled to secure his own land, and operate for his own benefit, without giving up any claim to the general profits of the company. The immense tide of emigration, which is now setting in to the United States, renders it next to a certainty that such a company, having secured a large quantity of valuable land, will prove eminently successful; it is estimated that the whole million acres will be disposed of in five years, and that a return of cent. per cent. will be made to the shareholders. An interesting feature in the regulations of the company is, that arrangements are made for securing first-class ships, and a contract made with the owners; that in case of non-performance of the voyage by shipwreck or other casualty, the passage-money shall be immediately returned. This will prevent a recurrence of those unhappy scenes, where the emigrant has been thrown upon a foreign land, stripped of his all, and without any visible means of ever again reaching his own country, much less of carrying out his plans, for the accomplishment of which he may have been toiling and saving for years.

STEAM-ENGINES.—The oldest evidence of the application of steam, as a power, is a patent granted to Thomas Savery, in July, 1698.

NEW CENTRIFUGAL DOUBLE-ACTION WATER-WHEEL.—Mr. Stephen Davenport, of Westminster, Worcester county, Massachusetts, has shown us his new wheel; it is constructed with a wheel to run upon centres, having a series of spiral, concave buckets, terminating in a reduction of the opening, for the escape of the water; which forces it against the inside of a case, which is also in a spiral form, running the contrary way; thus the direct action of the wheel produces a second action upon the case; this looks like a good power-saving machine. The inventor thinks he can make a wheel, which, with 96 in. vent, and 12 ft. head of water, he can get 12-horse power; this size of machine will cost $150, when ready for operation.—*Eureka.*

AN IMPORTANT CURE BY THE USE OF HOLLOWAY'S PILLS.—Extract of a letter from a gentleman residing at St. Heller's, addressed to the Editor of the *Impartial de Jersey*, dated June 18, 1847:—"Sir,—For some time I have suffered from a very severe malady, for which I sought the advice of the most eminent of the faculty, but to no purpose; I resolved, therefore (and in sheer despair), to give Holloway's pills a trial. By the use of one box, I found myself better; and, by a short continuance of this inappreciable medicine, I was perfectly cured, to the astonishment of my neighbours, who supposed that I could not possibly have recovered. Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London.

RAILWAYS IN RUSSIA.—The Russian Government has granted the company for constructing a railway from St. Petersburgh to Zarskojeselo, authority to extend their line as far as Gatschine, a town 44 versts beyond Yarskojezelo. The sum of 15,000 silver rubles per annum for 10 years has been awarded for the completion of this section It is to be begun in the course of the present year. This will be the third railroad actually in the course of construction in Russia. About 40 versts of the line from St. Petersburgh to Moscow have been opened.

RAILWAY PROGRESS IN THE UNITED STATES—AN EXPERIMENT WORTH TRYING AT HOME.—The circumstance of the axles of engines and carriages getting red-hot from over speed is an every-day occurrence at home. The heat generated in this way from the increased rapidity of transit, very recently, it will be remembered, jeopardised the safety of a bishop on the Great Western; while more than one exploit in speed, on the London and North-Western, has been spoilt from the self-same cause. In America—and it is well worth the attention of engineers and scientific men here—during the last few months some experiments on this subject have been made, the object being to save to the companies the heavy expense of oil. To the boxes of two of the wheels of one of the passenger cars, there is attached an apparatus, said to be both cheap and simple, whereby the iron axles of those wheels, and the brass boxes within which they revolve, are kept continually wet with cold water—water only is used to the axles instead of oil. No heat is generated, and the water did not get warm. The patentee proposes, with water and an anti-attrition composition, and which is not to cost 1-16th part of the present expense, to secure on any or every railway all the advantages of oil as universally used. One of the trips was short and pleasant, only 26 miles; but the cars went at the rate of 20 to 30 miles an hour, and at the several stopping places the axles were quite cool and wet. The water was but little discoloured; there was no perceptible attrition or friction. The expense of oil alone, on the Reading rail, in 1846, was $38,819 for 45,672 gallons, besides some $2000 worth of grease and tallow, all used on the axles of the car wheel; and if $40,000 a year on one road can be reduced to $2000, a public benefit will be effected to society—for the less it costs the companies to propel their machinery, the cheaper will they carry freight and passengers. The real point of importance appears to be the use and application of an agent that costs little, instead of oil at 80c. a gallon.

NARROW-GAUGE ENGINES.—The 8 ft. driving-wheel engines (Crampton's) on the working of which great expectations were formed by the narrow-gauge party, and the details of a very good performance of which we gave a short time since, has been singularly unfortunate upon the London and North-Western line. Although admirably balanced upon her wheels, and of excellent workmanship, hot axles have been a common occurrence with this engine. She got her buffer beam broken, and her axle boxes injured, by most culpable negligence on the part of the driver of a pilot engine. She was sent with instructions, for slight repairs, into the shed, where she remained much too long a period, considering the important influence her working was likely to have on the question of the gauges. Again, if we are not mistaken, we have ourselves seen several different men driving and stoking the engine in the few trips that she has taken. This change of men is certainly most injudicious with a locomotive having a fire-box of a novel construction, and difficult to feed. Practical people know that the best mode of firing and working such an engine is not to be ascertained either the first or second trip. The engine took a couple of trips yesterday, on the London and North-Western line, with ordinary trains, prior to her being taken into the shed to be thoroughly inspected. We rode down the line with her; and, although we think her fire-box defective, an evil which can be remedied, we are confirmed in the soundness of the favourable opinion we formerly expressed of her. The fire-box, when well fed, does not afford her all the steam necessary for high velocities with heavy lodes. It was pointed out at the time that the remedy was to be found in extended bearings; and we learn that in the new engines of this class, that have been ordered by various companies, the patentee is adding 3 ft. to the present 14 ft. bearings—this addition will enable him to make his fire-box of the old shape. Any stoker will then be able to feed it, and we have no doubt that Mr. Crampton will, with such an alteration, be able to show a very important improvement in the speed and power of narrow gauge passenger trains.

SEVENTH REPORT of the DIRECTORS of the COMMERCIAL BANK OF LONDON, Lothbury, and 6, Henrietta-street, Covent-garden, at an Annual General Meeting of shareholders, held at the Banking-house of the company, Lothbury, on Tuesday, the 20th of July, 1847.

DIRECTORS.

RICHARD WALKER, Esq., M.P., Chairman.
JOHN TAYLOR, Esq., Deputy-Chairman.

Thomas Barnewall, Esq.	Jonathan Hopkinson, Esq.
William Beresford, Esq., M.P.	Edward Oxenford, Esq.
William Sprott Boyd, Esq.	George Rennie, jun., Esq.
W. B. Collett, Esq., M.P.	John Savage, Esq.
Henry Cornfoot, Esq.	John Shewell, Esq.
Edward Cotton, Esq.	Joseph Thompson, Esq.
James A. Douglass, Esq.	Joseph Underwood, Esq.

MANAGER—Mr. Alfred R. Cutbill.

SOLICITORS—Messrs. Amory, Sewell, and Moores; and Messrs. Norris and Sons.

The advertisement calling the meeting having been read, the following report from the directors was read by the manager:—

REPORT.

The directors, in placing before the proprietors the seventh annual statement, have much pleasure in congratulating them on the continued prosperity of the company, notwithstanding the depressed state of commercial and monetary affairs during the past year.

By the accompanying balance-sheet, it will be seen that, after writing off all bad and doubtful debts, and paying the charges and current expenses of the past year, the net profits amount to £13,878l. 2s. 10d. Out of these profits a dividend, at the rate of 6 per cent. per annum, for the half-year ending 31st December, 1846, has been already paid; and the directors have now the satisfaction of declaring a dividend for the half-year ending 30th June, 1847, at the same rate, and, as usual, free from income tax.

After paying this dividend, and allowing for rebate of interest upon current bills, there will remain the sum of £4473 19s. 7d. to be added to the reserve fund—increasing that fund, with the additions made during the year, to £14,825 5s. 8d.

In compliance with the provisions of the Deed of Settlement, the following directors retire from office; but, being eligible for re-election, offer themselves as candidates accordingly at this meeting—viz.: Thomas Barnewall, Esq., Henry Cornfoot, Esq., Jonathan Hopkinson, Esq., Joseph Underwood, Esq.

COMMERCIAL BANK OF LONDON—*Balance Sheet, June* 30, 1847.

Capital subscribed	£641,400	0	0
Capital paid up	£128,280	0	0
Guarantee fund, invested in Three per Cent. Reduced Stock	10,351	5	1
Balances due to the customers of bank	409,925	13	4
Balance carried down, after deducting bad and doubtful debts, and paying all charges and current expenses	13,878	2	10
	£562,435	2	3
Cash in hand, Government securities, bills discounted, &c.	£558,435	2	3
Value of banking premises, fittings, and furniture	4,000	0	0
	£562,435	2	3
Dividend, at the rate of 6 per cent. per annum, for the half-year ending 31st Dec., 1846, already paid	£ 3,775	19	2
Ditto, at ditto, for the half-year ending 30th June, 1847	3,848	8	0
Rebate of interest on current bills	1,779	16	1
Balance carried to the guarantee fund (making that fund now amount to £14,825 5s. 8d.)	4,473	19	7
	£13,878	2	10
Balance brought down	£13,878	2	10

The report and balance-sheet having been read, the chairman (Richard Walker, Esq., M.P.), on the part of the directors, declared a dividend, at the rate of 6 per cent. per annum, free of income tax, payable on and after the 2d of August next.

Resolved unanimously,—

1. That the report, just read, be approved, printed, and circulated amongst the proprietors.
2. That Thomas Barnewall, Esq., be re-elected a director of this company.
3. That Henry Cornfoot, Esq., be re-elected a director of this company.
4. That Jonathan Hopkinson, Esq., be re-elected a director of this company.
5. That Joseph Underwood, Esq., be re-elected a director of this company.
6. That the thanks of this meeting be presented to the chairman, deputy-chairman, and directors, for the very able manner in which the affairs of the bank have been conducted by them.
7. That the thanks of this meeting be given to Mr. A. R. Cutbill, for his effective and zealous services as manager of this bank. (Signed) RICHARD WALKER.

The chairman having left the chair, it was Resolved unanimously,—

8. That the thanks of this meeting be given to Richard Walker, Esq., M.P., for his able and courteous conduct in the chair this day.

(Signed) JOHN TAYLOR, Deputy-Chairman.

COMMERCIAL BANK OF LONDON.—The directors hereby give Notice, that a DIVIDEND of [illegible] per cent. on the paid-up capital, at the rate of 6 per cent. per annum, free of income tax, for the half-year ending 30th June, 1847, will be PAYABLE at the Banking-house of the Company, Lothbury, on and after the 2d of August next.

By order of the board,
A. R. CUTBILL, Manager.

Dated July 20, 1847.

UNION BANK OF AUSTRALIA.—The directors having this day declared a DIVIDEND of THREE PER CENT. for the half-year, upon the entire paid-up capital of the bank, PAYABLE on the [illegible] of August, Notice is hereby given, that the transfer books will be closed from the 20th [illegible] until that date.

By order of the board,
S[illegible] JACKSON, Secretary.

30, Old Broad-street, London, July 19, 1847.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN,

J. MURDOCH (successor and late assistant to Mr. Hebert)

Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain REFERENCE TO A CLASSIFIED LIST OF PATENTS, (THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 137, Strand, London, where pamphlets, descriptive of the invention, may be had: at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 5s.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

THIRD CALL OF FIVE POUNDS PER SHARE.

The directors having passed a resolution, requiring the shareholders to pay a further CALL of FIVE POUNDS on each and every share held by them respectively, on the 2d day of August, 1847,—Notice is hereby given, that the shareholders are required to PAY such call on the day appointed, to one of the under-mentioned bankers; and, in default thereof, they will be charged with interest, at the rate of 5 per cent. per annum, from that date until the said call is actually paid:—

The Birmingham Banking Company } Birmingham.
Messrs. Attwoods, Spooner, and Co. }
Or at their London Agents:
Messrs. Jones Loyd and Co., for the Birmingham Banking Company.
Messrs. Spooner, Attwood, and Co., for Messrs. Attwoods and Co.; and at
Messrs. Moss and Co., Liverpool, for the Birmingham Banking Company.

A circular will be sent to each shareholder, which must be deposited at the bankers when the call is paid.

By order of the board of directors,
JOHN WM. KIRSHAW, Secretary.

34, Bennett's-hill, Birmingham, June 19, 1847.

CAMERON'S COALBROOK STEAM COAL AND SWANSEA AND LOUGHOR RAILWAY COMPANY.

Registered, and incorporated by 9 and 10 Victoria, cap. 401.

The SECOND ANNUAL GENERAL MEETING of the proprietors of this corporation will, in pursuance of, and for the purposes expressed in the Deed of Settlement and Act of Parliament incorporating the company, be HELD at their offices here, on Tuesday, the 27th day of July inst, at One o'clock in the afternoon precisely.

By order of the board of directors,
A. C. HOWDEN, Sec.

2, Moorgate-street, London, July 12, 1847.

LONDON, BRIGHTON, AND SOUTH COAST RAILWAY.

ENGINES AND ENGINE-HOUSES TO BE LET OR SOLD.

The directors will be ready, on the 14th of August next, to RECEIVE APPLICATIONS to RENT, or PURCHASE, the ENGINES, ENGINE-HOUSES, WATER-TANKS, RESERVOIRS, &c., at FOREST-HILL or CROYDON.

ATMOSPHERIC STOCK FOR SALE.

ONE PAIR of CONDENSING ENGINES, of 50-horse power each, with air cylinders, 57 inches diameter, 3½ feet stroke, made by Messrs. Maudslay, Field, and Co., now fixed at Croydon.
ONE PAIR of ditto ditto, at Forest-hill.
ONE PAIR of ditto ditto ditto.
Each pair of the above engines is furnished with three Cornish boilers.
FOUR THOUSAND to FIVE THOUSAND TONS of CAST-IRON ATMOSPHERIC TUBES, 15 inch diameter pipes and valve boxes.
About TWELVE MILES of LONGITUDINAL VALVES.
Also, the same length of WROUGHT-IRON RODS, ¾-inch diameter, together with a quantity of BOLTS, SCREWS, &c., to complete the same ready for fixing.

Parties desirous of purchasing all, or any portion of the above, are requested to send in sealed tenders, marked "Tenders for Atmospheric Apparatus," under cover, addressed to the secretary, on or before Saturday, the 14th August next.

Purchasers of any part of the above may have the same delivered by the company at New Cross or Croydon; but parties purchasing the engines for removal, will have to take them down, and load them on the company's trucks.

Further particulars may be known on application to Mr. R. J. Hood, engineer, Brighton.

London Terminus, July 8, 1847. By order, T. J. BUCKTON, Secretary.

RAILWAY TELEGRAPHS.—Any RAILWAY COMPANY having COMMENCED LAYING the WIRES for the USE of the ELECTRIC TELEGRAPH upon their lines, would do well, before they adopt any *particular instrument*, to WAIT till the 12th of August, when the merits of our PATENT TELEGRAPH will be fully exemplified; and we shall then be prepared to GRANT LICENSES for its use, with power to apply it in every possible way, without control or restriction.

BRETT & LITTLE, Furnival's Inn, London.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their IMPROVED PATENT ELASTIC METALLIC PISTONS.

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.
2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.
3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c.

PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION.

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do not become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,

Goswell Mews, Goswell-road, London.

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public.

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

IMPORTANT TO RAILWAY COMPANIES.

PATENT KAMPTULICON COMPANY, 18, CORNHILL.

This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.

By order of the board, P. G. GREVILLE, Secretary.

THE LATE ACCIDENT AT THE DEE BRIDGE.

PATENT METALLIC SAND, OR ENGLISH POZZOLANO. GREAT REDUCTION IN PRICE.

Extensively used in mortar and concrete at the great tunnels on the London and Birmingham Railway, in the foundations of the new Houses of Parliament, sea walls on the South Devon Railway, Clifton Reservoirs, and other works of importance.

From its chemical qualities, the metallic sand forms, in admixture with lime and common sand, a cement, mortar, or concrete, of flinty hardness, and almost entire incompressibility; and, from its adhesive and impervious qualities, it completely and for ever excludes water. The more it is exposed to the atmosphere, and to wet and damp, the harder and more durable it becomes.

As an external stucco, the metallic sand cement is unaffected by frost or wet; in appearance it resembles the best Portland stone—requires, therefore, neither colour nor paint, and is entirely free from vegetative cracks and blisters, to which Roman cement is liable.—Further information will be given, and specimens shown, on application to Mr. C. K. DYER, 4, New Broad-street, London.

ANALYSIS OF THE PATENT METALLIC SAND.

Silica	49	Lime	6
Oxide of iron	32	Magnesia	2
Alumina	8	Zinc	3

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

W. H. RICHARDSON, JUN., & CO., DARLASTON, *STAFFORDSHIRE,*

MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Roose's recent invention (patented August, 1846).—Address as above.

STRONG MIXING PIG-IRON.—The YSTALYFERA IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics o ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late DAVID MUSHET, Esq., M.I.C.E.:—

"It greatly exceeds, in *strength*, in *defective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and, in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address THE YSTALYFERA IRON COMPANY,
Dated June 22, 1847. *Near NEATH, SOUTH WALES.*

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS. DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath.

Dated June 22, 1847.

NORTH WALES ADVENTURE.

SNOWDON AND DALAWIN COPPER MINES, In 800 shares, of £10 each.

The SETTS on which these two promising MINES are situated, are in the county of CARNARVON, and are held under lease from the Hon. Colonel Pennant and the Hon. E. Bulkeley, for 21 years (about 18 of which are unexpired), at the moderate dues of, for Dalawin 1-10th, and for Snowdon 1-16th, with water-courses included, and all other mineral rights reserved to the lessors.

The setts extend over a considerable extent of mineral ground, from which large returns of copper have been made. The whole of the lodes comprised in the Snowdon district are six in number, and in the Dalawin district three have been opened on; *both mines are in full course of work, and making regular returns of copper*—upwards of £10,000 value [illegible] which has been disposed of.

The engine-shaft at Dalawin Mine has been sunk 30 fathoms below the adit level, and a level driven upwards of 30 fathoms on the course of the vein, from which large quantities of copper have been obtained. The vein is still going down through the whole length of the level, and the present working is half a yard wide, producing (from the mine) ore at from 12 to 15 per cent. A 36-feet water-wheel, with pumps, grinder, dressing machinery, and necessary buildings, have lately been erected at considerable expense, and are fully capable of grinding and preparing for market a large quantity of ore.

The Snowdon Mine is worked by six levels driven on the vein—two only of these are at present worked, and producing good returns; the ends of these levels are still rich in ore, and it is proposed to connect these by shafts, so as to afford an opportunity of working the whole by means of stopes, by which a considerable quantity of ore would be obtained at a small cost (the expense of sinking these shafts would be paid by the ore obtained in sinking the same); the water from the mine passes off by these levels, thereby rendering the expense of pumping unnecessary. A 40-feet water-wheel, with two sets of grinders, dressing machinery, and stamp-heads, have been erected, and a large expense has been incurred in forming a road to the grinding-house, so as to remove the difficulty of transit from this long-neglected, but valuable, mine.

The present proprietors—being only two in number—are anxious to work the mines in a more effectual manner, and upon a more extended scale—having hitherto confined their operations to only one lode in each mine. They are, consequently, induced to offer ONE-HALF of their INTEREST to the public, upon terms which, considering the importance of the setts, and the richness of the present lode, must be deemed exceedingly reasonable. It is proposed to divide the mines into 300 shares, and to dispose of 150, at £10 per share—the present proprietors keeping the 150 shares. The concern is managed and conducted altogether on the Cost-book System.

For shares, and further particulars, apply to Crossman, Sommers, and Co., agents, "Original Registry Office for the Purchase and Sale of Mining Shares," No. 28, Threadneedle-street, London.

ELBOROUGH SILVER-LEAD, CALAMINE, AND BARYTES MINE.—PROSPECTUS.

This MINE is situated in the parish of HUTTON, Somerset, within four miles of Weston-Super-Mare, and Uphill Quarry, and 2½ miles of the Banwell station, on the Great Western Railway, is divided into 256 shares, and managed on the Cost-book System. The sett, which comprises 800 fathoms in length and 400 fathoms in width, contains a great number of lodes, which have proved very productive as far as they have been wrought.

It is well-known that for centuries past large quantities of lead ores have been raised by the system of gruffing, a rude sort of mining of the district, and parties so working, obtained large profits, although paying at the rate of 1-6th and even 1-4th to the lord, as dues or royalty. But, although this sett has been a very productive one, even by the rude operations of the gruffers on the backs of the lodes, and within a few fathoms of the surface, yet for want of more mining experience nothing has been done effectually in proving the lodes; traces of the gruffer's operations are visible for several hundred fathoms in length, and the rubbish, or waste deposits therefrom, on the surface, sufficiently indicate that large returns may be expected, if these mines are properly worked.

The report of the neighbourhood induced the present company in May last (1846) to solicit a grant of the sett; and having obtained it at moderate dues, they commenced clearing up the old workings in several places; and having fully satisfied themselves of the value of the sett, they have commenced sinking two new shafts, in order to get under the old workings, and to effectually work the mine—one of these shafts is on a perpendicular lode, having six other lodes underlaying towards it, and which, if they continue their present underlay, will all be intersected within the depth of 60 fathoms from surface.

The other is on a lode from which several tons of lead have been raised by the present company, from the old workings, which on this lode have been prosecuted to the depth of 20 fathoms, leaving a course of lead now in the bottom—but having been wrought in such a zig-zag manner, they are unfit for the purpose of mining advantageously; this shaft is, therefore, being sunk east of these workings in whole ground.

It is the general opinion of miners acquainted with the locality, that this mine can be prosecuted to the depth of 100 fathoms, without the aid of a single pumping-engine; and this, with other advantages connected with the concern, justify the proprietors in stating, that in their opinion the outlay of a comparatively small capital will bring the mine into a profitable state of working.

REPORTS

TO MR. R. VIVIAN, TUCKINGMILL, CAMBORNE, CORNWALL.

SIR,—I have been a resident in this part for the last eight years, and have traversed this mineral country from the Bristol river to Wells, which is about 20 miles north and south, and from Bath to Bridgewater river, which is about 30 miles, east and west, and have, in so doing, examined very carefully the geological and mineralogical position o those localities, and find they are composed of mineral or mountain limestone, old red sandstone, new red sandstone, lias, penant, magnesian limestone, and conglomerated limestone, quartz, fluor-spar, silex, and jasper; there are hundreds of lodes and veins in this range, which carry metallic and mineral ores, such as lead, iron, copper, manganese, calamine, barytes, pyrites, reddle, antimony, coal, yellow ochre, and white lead ores.

Having heard that there were some of my countrymen at Elborough, near Banwell, working a mine, I went to see them on Tuesday, and found Capt. Trevithick and his party dressing lead and calamine; Capt. Trevithick asked me to walk around the mine with him; I went underground at Vivian's shaft, and saw Vivian's lode, 17 fathoms deep, nearly perpendicular—a very kindly lode, 2½ ft. big, composed of flookan, elvan, and lead—good saving work. At Chapman's shaft a strong lode, and very kindly north lode: there are several lodes south of Vivian's lode, and underlaying north, which I think are likely to drop in and improve this lode in depth. I think this altogether a very promising mine. It is in the mountain limestone that this mine is, and it is in the mountain limestone that the principal British lead mines are situated, and they are those of Somersetshire, Derbyshire, Yorkshire, Cumberland, Shropshire, Flintshire, and Denbighshire—these are the most productive for lead and calamine.

The lead mines in Cornwall and Devon are in primitive rock, so that the Cornish and Devon miners in general know but little about limestone formation.

I think Somerset will make a great mining district, some day. I have an account of a little mine that paid in 1812, £808 15s. 10d. for dues; and take the average, they were no more than 15 fathoms deep, and they rose hundreds of pounds' worth, 8 or 10 fathoms deep; this mine is four miles east of Elborough Mine. THOMAS ROBARTS.

Oatland's Cottage, Wrington, near Bristol, Somerset, May 6.

SIR,—In compliance with your wish, I hereunder hand you a few remarks on the present appearances and future prospects of Elborough Mine.

This mine is situated on Elborough-hill, in the parish of Hutton, and about three miles distance from Banwell station (Great Western Railway); the set extends nearly a mile on the course of the lodes (eight or nine in number), nearly the whole of which have been worked on the backs, by the old men, and from the appearance of the work done, great quantities of lead have been raised.

I find your operations are at present confined to sinking a shaft on the course of Vivian's lode, which appears to be the principal one, and most regular in its course, nearly perpendicular—its longitudinal direction is about 16° south of east; this shaft is sunk 18½ fathoms from surface, at which point the lode is 2 feet wide, composed principally of light-coloured flookan, spar, and calamine, impregnated with lead throughout—a very kindly lode, indeed; I would strongly recommend you to get down this shaft with all possible speed, bearing in mind there are four or five lodes to the south of this, dipping towards the lode you are now sinking on; should they retain their regular course and underlay, you will have the junction of these lodes in the shaft, within the depth of 50 fathoms; when down about 16 fathoms from surface with this shaft, they cut into a large cavern, which has been made into a good whim-plat—here an end was begun, driving east of shaft, where the lode is at present small—composed of flookan, spar, and lead. I would also recommend you to place four men in this end, as it is my opinion that the whole of the lodes in this part approximate, and form a junction between 20 and 30 fathoms further east than you now are—this being done, you will fairly prove this part of the mine; from the favourable state of the ground, a great quantity can be developed in a short time; should it continue as it now is, the cost for driving or sinking will not exceed 60s. per fathom.

On Chapman's works the lode has been laid open about six fathoms deep, where it is 3 feet wide, composed of barytes, calamine, and beautiful spar, intermixed with lead—a very promising lode.

Further north still, about 60 fathoms, there is a parallel lode with the one last mentioned; this lode has been wrought on 14 fathoms deep, where it is 2 feet wide—composed of barytes and a little lead; Capt. Trevithick informs me the returns from this place have been equal to the outlay; these works are for the present suspended.

Before I conclude, I beg to observe, that it is my opinion, from the congenial strata in which the lodes are imbedded, and the promising appearance of the lodes at this shallow depth, that you will at no distant period have a profitable concern. F. C. HARPUR.

Mendip Hills Mines, May 6, 1847.

London:—Printed and Published, weekly, by HENRY ENGLISH, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. July 24, 1847.

*** It will at all times save much delay and inconvenience, if communications are directed simply

TO THE EDITOR,
Mining Journal Office,
26, FLEET-STREET, LONDON.

And POST-OFFICE ORDERS, &c., must be made payable to WILLIAM RALSTON HANDLE, as acting for the proprietors.